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CONGENITAL MALFORMATIONS AND MATERNAL RUBELLA: PROGRESS REPORT.

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WITH THE COLLABORATION OF

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In a previous paper (Pitt, 1957), criticisms were made of high risk figures which had been given by some early Australian workers in the field of maternal rubella and congenital malformations. It was pointed out that these estimates, being based on retrospective data, were therefore likely to be fallacious, and that prospective studies were needed to give a true estimate of the malformation rate in maternal rubella. After giving the results of a small prospective series observed at the Royal Women's Hospital, Melbourne, the paper set out the plan for an Australia-wide prospective study, which is the subject of the present report.

Since 1957, a number of authors have added to the literature of the subject by reporting the results of their studies. These studies include a number of pros-

pective observations on living children born after rubella in pregnancy, and some pathological studies on autopsy material obtained from terminations of pregnancy. Both sources of data will now be reviewed.

LIVING MATERIAL.

Ingalls (Ingalls, 1957) summated earlier American series, which totals 100 cases of maternal rubella. These yielded an incidence of major defects in the infants of 15.9% when rubella was contracted in the first trimester, and of 14.3% when rubella was contracted in the second trimester. In the same year, Greenberg and his co-workers (Greenberg, *et alii*, 1957) reported the result of a prospective investigation in New York City, which yielded for the first trimester 31 live births following maternal rubella, with three cases of congenital malformation (9.7%). The incidence for the second trimester (75 cases) was 1.3%.

Bradford Hill and his co-workers have reported (Bradford Hill *et alii*, 1958) the results of a prospective inquiry, which was made possible by the requirements of sickness benefits regulations operating under the British National Health Scheme. From the claims of married women at work who had rubella, they were able to trace 38 who were pregnant at the time. Of these, 18 women had contracted rubella in the first trimester, and had given birth to four live infants with congenital defects (22%). This paper also quotes a French study

(Lamy and Seror, 1956) which found a much higher incidence of congenital defects following maternal rubella in the first trimester in 40 cases. Twenty-two infants were found to have major defects, an incidence of 55%. Bradford Hill's paper appears to be the first in which gestation is shown as weeks of pregnancy rather than as months or trimesters, and as a result he has shown that the foetal risk in the first four weeks is at its maximum, and not the minimum, as has been thought. The same concentration of cases of rubella damage related to the first month of pregnancy, is pointed out by Dekaban (Dekaban *et alii*, 1958). In addition to their case report of a child with multiple malformations following maternal rubella in the fourth week, they plotted the time incidence of defects in a further 108 cases drawn from the literature. Although no figures are given, a graph is shown indicating that the highest incidence of the three most important congenital anomalies (cataract, deafness and congenital heart disease) occurred when rubella complicated pregnancy in the first five weeks of gestation.

Another prospective study in England by Jackson and Fisch (1958) pays special attention to the incidence of deafness, by prolonging the follow-up examinations of the children until they were aged four years. They were thus able to diagnose several cases of mild deafness, which, in the absence of symptoms and of hearing tests at the ages of one and two years, had not been suspected. It was found that in 46 cases in which rubella occurred in the first 16 weeks of pregnancy, the incidence of major congenital defects was 32.6%, the commonest being mild and severe deafness (30.4%).

An epidemic of rubella in Montreal in 1955 provided material for a study by Oxorn. He reported (Oxorn, 1959) 38 cases of maternal rubella in the first trimester, with a proportion of major congenital defects of 19%. No details are given of the arrangements for follow-up examination, and as no cases of deafness were reported, it seems that full use of paediatricians may not have been made.

A series from Denmark (Jacobsen and Christensen, 1959) comprised 28 cases of maternal rubella occurring in the first four months of pregnancy, with a malformation rate of 13%.

Further contributions to the study of malformations have been by Coffey and Jessop (1959), who in addition to their general surveys have recorded a small series of 10 cases of maternal rubella occurring in the first trimester, with two cases of congenital malformation (20%).

Seigel and Greenberg (1960), continuing their earlier studies of the problem, have now recorded their findings over a nine-year period from 1949, in New York City. The advantage of this long-term study is that they were able to compare epidemic years (1955 and 1958) with non-epidemic years. They found that the association between rubella in early pregnancy and congenital malformations appeared to be limited to epidemic years only—a most important observation. This is summarized in Table I.

No cases of deafness or mental deficiency are recorded from this study, portion of which suffers from an inadequate follow-up of the children. An association with foetal death (in common with other viral diseases in pregnancy) and with prematurity was also noted.

A further paper from France (Lamy and Seror, 1959) is again in marked contrast to the findings in other countries, which (except Jackson's study) show a malformation rate from maternal rubella of less than 25%. These investigators sent questionnaires in the fifth month of pregnancy to 110,000 pregnant women registered in the Department of the Seine. One half of these replied to the questions "Have you had rubella?" and "Have you been in contact with rubella since pregnancy began?". Although for full accuracy, as the paper points out, information should have been sought from the women who did not reply, it seems probable that the 48 cases

of maternal rubella found were a satisfactory sample for a prospective study. The infants were followed up, and of the 48 cases in which rubella had been contracted in the first four months of gestation, there were 24 cases of major malformation in the infants—an incidence of 50%. Moreover, on restricting the assessment to the first eight weeks of pregnancy, these workers report an even higher incidence of 86%, with an incidence of 20% when maternal rubella occurred from the ninth to the twentieth week. Lamy and Seror comment on the marked discrepancy between their own high figures and other much lower estimates of risk, and suggest that alteration in virulence of the rubella virus is responsible for this phenomenon.

TABLE I
Epidemics and Malformation Rates—Rubella.
(After Siegel and Greenberg, 1960.)

Period.	Total Infants Studied (1-13 Weeks' Gestation).	Defective Infants.	Rate.
Epidemic years . . .	41	5	12.2%
Non-epidemic years . . .	26	0	0

S.E.D. = 4.83; $t = 2.53$; $0.02 > P > 0.01$.

In this inquiry, apart from the actual sufferers from rubella, a further 283 women reported that they had been in contact with rubella in the first four months of pregnancy. Only two major malformations, not typical of rubella embryopathy, were found in the offspring from these pregnancies, and the authors conclude that the frequency of non-apparent forms of rubella is very low, or if they do exist, they are not dangerous to the fetus. These findings do not confirm the claims of Lundstrom concerning the significance of contact with rubella in immune pregnant women.

Ingalls has once more made a special contribution to the knowledge of this subject in his recent paper (Ingalls *et alii*, 1960) on the "Epidemiology and Teratology of Rubella". The most important comments therein are as follows: (i) Rubella, a springtime disease, shows long-term fluctuations of about seven years, epidemic peaks being generally preceded by a three-year build-up and followed by a gradual recession. (ii) Unlike measles, chicken-pox and mumps, rubella is not a disease predominantly of the pre-adolescent years. (iii) No particular nationality is known to be immune to German measles. (iv) Unexpected population aggregation, such as military camps, promote unusual epidemics, as in 1940, when there had been no serious outbreak of rubella in Australia for the previous 17 years. (v) Though the virulence of rubella virus may vary in both place and time, and also in teratogenic effects, this has yet to be demonstrated satisfactorily.

A report from "The Fetal Life Study, New York", by Michaels and Mellin (1960) lists 25 cases of maternal rubella (first trimester, 14), with three cases of congenital malformations. As the follow-up of the infants was limited to 12 months, data on deafness and mental deficiency are lacking. This paper gives an excellent critical review of previous work. The findings from the various studies are summarized in Table II. This table illustrates how the teratogenicity of rubella virus appears to vary from place to place, and perhaps from time to time.

AUTOPSY MATERIAL.

In the identification of disease, pathological examination of the body after death is usually considered superior to clinical observation of the living patient. In antenatal disease, the reverse may well be the truth. The dissection of the embryo is so difficult, the knowledge of the norms of embryology is as yet so imperfect and the presence of artefacts is so common that precision

of diagnosis cannot be expected. Observation of the child who survives is more profitable; thus it is more revealing to learn that a four-year-old child has a 50 decibel hearing loss in both ears after maternal rubella, than that an embryo, after the same disease, shows some histological changes in the organ of Corti. Nevertheless, pathological examination of embryos is an important complement to clinical observation, but is a source of data that has been little tapped.

A widespread epidemic of rubella in Sweden in 1951, together with the ease with which therapeutic abortion is permitted in that country, provided material for Lundstrom (Lundstrom, 1957) to carry out a patho-anatomical study of 67 foetuses, in cases in which maternal rubella had been diagnosed by a physician. Examination and dissection of these showed a high proportion (37%) of instrumental damage caused by the surgical procedure of terminating pregnancy, but

TABLE II.
Recent Studies in Maternal Rubella.

Country.	Author.	Cases.	Malformation Rate.
U.S.A.	Ingalls (1957).	63	15.9% (first trimester)
U.S.A.	Greenberg <i>et alii</i> (1957)	31	9.7% (first trimester)
England.	Bradford Hill <i>et alii</i> (1958).	18	22% (first trimester)
England.	Jackson and Fisch (1958).	46	32.6% (first 4 months)
Canada.	Oxorn (1959).	38	19% (first trimester)
Denmark.	Jacobsen and Christensen (1959).	28	13% (first 4 months)
Irel.	Coffey and Jessop (1959).	10	20% (first trimester)
France.	Lamy and Seror (1959).	48	50% (first 4 months)
U.S.A.	Michaels and Mellin (1960).	14	21.5% (first trimester)

only four cases of malformation (microphthalmos, two; talipes, one; fusion of adrenals, one). Though the incidence of malformation in this series is thus apparently 6%, it is very doubtful if the last two diagnoses are related to maternal rubella. Microscopic findings in this study have yet to be reported. More recently there has been a report by Gray (Gray, 1960) on a further six embryos obtained after termination of pregnancy for maternal rubella. In three of these lesions were found (Table III).

Other individual reports relating to eye and ear defects have been made, but are not considered here.

Lundstrom's series is the only comprehensive one with adequate numbers, and, within the limits of his techniques, it confirms the clinical observations made on living children — namely, that normality in the child is the rule, rather than the exception, after an attack of maternal rubella in early pregnancy.

PRESENT STUDY.

The present study, which commenced on January 1, 1956, was preceded by a publicity campaign directed through the British Medical Association and the Australian College of General Practitioners. General practitioners and obstetricians throughout Australia were invited to cooperate with the University of Melbourne in reporting cases of rubella in pregnancy. Those who volunteered to do so (665) were asked immediately to notify the Department of Obstetrics and Gynaecology by telegram or telephone. In most cases the report was received on the day that the diagnosis of rubella in a pregnant woman was made. This enabled a second opinion to be requested, a punch-card to be forwarded

and glass slides to be sent to the referring doctor for the purposes of obtaining a blood film. This method of voluntary notification, whilst providing only a sample of cases of rubella in pregnancy, was considered satisfactory in the following respects: (i) With regard to the child's future condition, the survey was entirely prospective and free from selection bias. (ii) Very early notification enabled the clinical diagnosis of rubella to be checked by means of a second opinion, and by scrutiny of details on the punch-card (Figure I). (iii) The opportunity was thus also presented to examine peripheral blood smears for the study of the white cell picture and for the presence of glandular fever cells. These smears were made by the referring doctor, and forwarded for examination to Miss B. Wilson, of the Royal Children's Hospital, Melbourne.

In this survey a special effort was thus made to ensure that the diagnosis of rubella, which often presents

TABLE III.
(After Gray, 1960.)

Period of Gestation.	Organ Affected.
51 days	Organ of Corti.
63 days	Septum primum (patent interauricular septum).
28 days	Posterior parts of both lenses.

difficulties to even the most experienced practitioners, was as firmly based as possible. Second opinions were requested whenever possible, and were obtained in 96 out of 178 cases notified. In 19 of these, occurring in the Melbourne area, the chief author (D.B.P.) visited and examined the mothers himself. In some country areas access to another doctor was sometimes difficult, and second opinions were not available. However, when such single opinions were supported by good clinical descriptions, the cases were included in the rubella series.

Other cases (33) were rejected from the series for the reasons set out in Table IV.

When the doctor appeared vague in his diagnosis or his clinical description, it was not thought reasonable to accept the case. Six cases without the characteristic adenopathy of the posterior cervical areas were also excluded, as were cases in which the patient was not seen by a doctor at all. One case in which a rash was visible for 10 days seemed so unusual as to justify exclusion; the longest duration of rash recorded in accepted cases was seven days.

In three cases, a second opinion did not confirm the first diagnosis, and this occurrence stresses the importance of obtaining a second opinion when the serious diagnosis of rubella in pregnancy is made. In five cases, the referring doctor refused to cooperate further in the survey.

There remained 145 cases available for study, of which there were 61 in which rubella occurred in the first trimester. The outcome of these 145 cases is summarized in Table V.

Of the 61 cases in which rubella occurred in the first trimester, in only 14 was termination of pregnancy carried out; this low figure (22%) illustrates the change in medical practice that has been occurring since the days when termination of pregnancy was practically a routine procedure in this country.

In a further 14 cases, spontaneous abortion occurred in the first trimester, an incidence of 11.4%. As a rate of 10.5% has been recorded elsewhere in a study of 130 mothers of normal children (Pitt, in the press) it does not appear, despite earlier impressions to the contrary, that maternal rubella is a factor in spontaneous abortion. The validity of this comparison is set out in Table VI.

In three cases, foetal death in utero occurred after the third month, one at full term (hydrops foetalis).

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	
75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	
SURVEY OF RUBELLA PREGNANCIES												1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24														
DEPT. OF OBSTETRICS & GYNAECOLOGY												UNIVERSITY OF MELBOURNE														
REPORT ON A CASE OF RUBELLA occurring during PREGNANCY (to be completed by the Practitioner in charge)																										
PATIENT'S NAME (or Symbol)																										
70	AGE	GRAV. (Total No. of Pregnancies, including present one)											1													
69	PARA.	(No. of previous Pregnancies beyond 28/52 gestation)											2													
68	L.M.P.	CONFINEMENT DUE (Date)											3													
67	HISTORY OF CONTACT	(Recent) with Rubella. No. Yes											4													
66	DEGREE OF CONTACT	(e.g., Casual, Household, etc.)											5													
65	ONSET OF FIRST SYMPTOM: Date	Which Symptom?											6													
64	ONSET OF RASH: Date	First Seen (Site)											7													
63	CLINICAL SYMPTOMS*:	Feverishness. Vomiting											8													
62	Headache.	Sore Eyes											9													
61	("Present" or "Absent") Sore Throat.	Tender Glands											10													
60	Other Symptoms.												11													
59	CLINICAL SIGNS* Fever.	Pharyngitis. Enanthem											12													
58	Exanthem (Rash)												13													
57	(1) DESCRIPTION OF RASH: (i) Flat or Raised (ii) Fine (Scarlatiniform) or Coarse (Mollbilliform)												14													
56	(iii) Round Macules or Irregular Macules.												15													
55	(iv) Erythematous or Purpuric.												16													
54	(v) Duration — 1, 2, 3 or more days.												17													
53	(vi) Peeling — Present or Absent.												18													
52	(2) DISTRIBUTION OF RASH (+ or -) (a) Face. (b) Trunk. (c) Limbs.												19													
51	(3) ORDER OF APPEARANCE (1, 2, 3) : Face. Trunk. Limbs.												20													
50	(OVER)												21													
49	Bands & McDougall Pty. Ltd. Invicta Pat. No. 4290												22													
48	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25

FIGURE IA.

GLANDULAR ENLARGEMENT ("Slight," "Moderate" or "Gross") ("Tender" or "Non-Tender")

OCCIPITAL. POST-AURICULAR. CERVICAL.

OTHERS. SPLEEN.

ARTHRITIS (Present or Absent). From (Date)

COMPLICATIONS**REMARKS**

(*Exact details are requested to test the suggestion that variability in clinical features may affect the probability of damage to the foetus.)

Signed

Address

Date

SECOND OPINION:

I concur in the clinical diagnosis of Rubella in the case above.

Remarks

Signed

Address

Date

(Please return this form as early as possible to:—)

Dr. DAVID PITTS, Royal Women's Hospital, Carlton, N.S. Victoria.)

FIGURE IB.

Eighteen infants had major defects, of whom 14 had typical rubella embryopathy, to be described later. Eighty-nine infants, aged from eight months to four years, are apparently normal at the time of writing, though further follow-up may reveal some cases of deafness not suspected when the children were examined at the age of less than one year. Most of these children are being examined by us in the various capital cities of Australia, by arrangement with the various children's hospitals.

In Victoria, 65 children are being examined at the Royal Children's Hospital by the chief writer (D.B.P.); each child is also examined by an eye specialist, audiometrist and dentist. Visits to the hospital take place at six months, and at one, two, three and four years. In addition, a neonatal report is requested from the

TABLE IV.
Rubella Survey—Rejected Cases.

Reason.	Cases.
Incorrect diagnosis of pregnancy	3
Inadequate clinical details	9
No adenopathy	6
No rash	1
Rash visible 10 days	1
Rubella not seen by doctor	5
Adverse second opinion	3
No reply from doctor	5
Total	33

attending *accoucheur* to cover the obstetrical history. A similar programme of follow-up is in progress in Perth (12 cases), Sydney (eight cases), Brisbane (eight cases), South Australia (10 cases) and Tasmania (four cases).

Epidemiology.

Reference to Figure II will indicate the pattern of rubella occurring during the four years of collecting the clinical material (1956-1959). Unfortunately, in the State of New South Wales rubella is still not a notifiable disease, so that the information is incomplete for the whole of Australia. In the case of other States, it is well known that only a small proportion of diseases is notified by general practitioners, so that the figures used give only a sample of the incidence of rubella. However, as the cases are a random sample, it is useful in indicating the peaks of epidemics. Figure II shows another sample—cases of rubella in pregnancy reported in this survey, which are indicated by marks corresponding to the date of rubella in the pregnant woman. Cases of rubella embryopathy are also shown. The graph shows the spring epidemics that occurred each year in Victoria, which provided most of the cases, and three special epidemics. These were as follows: (i) in South Australia in the spring and summer of 1956-1957, with a small secondary peak late in 1957; (ii) in Western Australia, a small "build up" epidemic in the spring of 1957, with a big epidemic in the spring of 1958; (iii) a small epidemic in Queensland in the spring of 1957 (during 1960 the incidence of reported rubella was negligible).

The distribution of the cases of rubella embryopathy does not suggest that rubella damage is confined to rubella epidemics (as was indicated by the American data of Siegel and Greenberg, 1960), there being four cases (51, 58, 131 and 171) occurring between epidemic peaks.

Maternal Factors.

Analysis of the data recorded on the punch-cards yielded a variety of information, chiefly on signs and symptoms. Study of the latter was made for the following reasons: (a) As a check on the diagnosis of rubella. (b) To attempt some assessment of the severity of the disease, and hence the virulence of the virus. In the absence of satisfactory laboratory techniques for cultivating the virus, this appears at present to be the

only method. If, as is suspected, the teratogenicity of rubella virus is related to its virulence, this can be demonstrated at present only by comparing the clinical features of various outbreaks. The present clinical features are therefore recorded for future comparison. (c) To compare the severity of the maternal disease, and other factors, in affected and unaffected groups of babies.

TABLE V.
Rubella Survey—Material Studied.

Result.	Cases.
Pregnancy terminated	14
Spontaneous abortion (rate, 11.4%)	14
Fetal death after three months	5
Abnormal live-born children	18
Normal survivors	89
Not traced	7
Total	145

Maternal Age.

The average age of the mothers, and the mean family size are shown in Table VII.

No significant difference in maternal age was found in the small group with rubella-damaged children, nor did either mean significantly differ from the mean maternal age in Victoria for the years 1956 to 1959 (27.97 years). Similarly, the mean family size was about equal in all three categories.

TABLE VI.
Abortion Rate in Maternal Rubella.

Group.	Mean Maternal Age (Years.)	Mean Family Size.	Abortion Rate.
Rubella group (145, private practice)	26.2	2.9	11.4%
Normal group (130, public hospital)	26.74	2.78	10.5%

Contrary to the impressions of many, therefore, it is not the young primigravida who is the typical victim of rubella in pregnancy, but more commonly the average woman in her late twenties, having her third baby.

Contact with Rubella.

In 78 of the 145 cases there was a history of known contact with a case of rubella (53.8%). From 61 of these it was possible to calculate the incubation period, which according to the doctors' statements varied from six to 42 days, with a mean of 15.0 days. This mean did not vary between the normal and affected groups.

Although the question was not included in the questionnaire, in 16 of the above-mentioned 78 cases the doctor volunteered the information that antiserum had been administered prophylactically to the mother shortly after the rubella contact. In 12 of these, the old inadequate dose of 5 ml. of gamma globulin was given, and failed to protect the mother against rubella. These cases occurred before the recent increase in dosage to 20 ml. was generally adopted, in accordance with the recommendation of Krugman and Ward (1958). The other injections given were pooled human serum (10 ml.) and rubella antiserum (10 ml.).

Clinical Features.

The well-known symptoms and signs of this mild disease, as revealed by this inquiry, are set out in Figures III and IV.

After the usual symptoms of malaise and feverishness, tenderness of the glands was most commonly complained of, and as a physical sign, enlargement of occipital,

post-auricular or posterior cervical glands was present in all cases. The glands were involved in frequency in the foregoing order, and characteristically were usually tender. The expression "moderately enlarged" ("+") was most commonly used to describe them.

Many patients complained of headache, sore throat and sore eyes, and 22% had symptoms of arthralgia towards the end of their illness. The last symptom usually appeared when the rash was fading, or a little later, up to the eighth day of illness. The average period of onset after the appearance of the rash was 2.7

The rash was obviously seldom typical; in 44% of the cases the rash was described as scarlatiniform and in 33% as morbilliform. In the remainder the rash was not described. Indeed, it is probably this lack of uniformity that is specially typical of rubella. Peeling was only once observed, though the rash was sometimes described as being itchy. The spots were often described as being raised or palpable to light touch. The rash was nearly always present on the trunk and limbs, and usually on the face. The mean duration of the rash was 3.1 days.

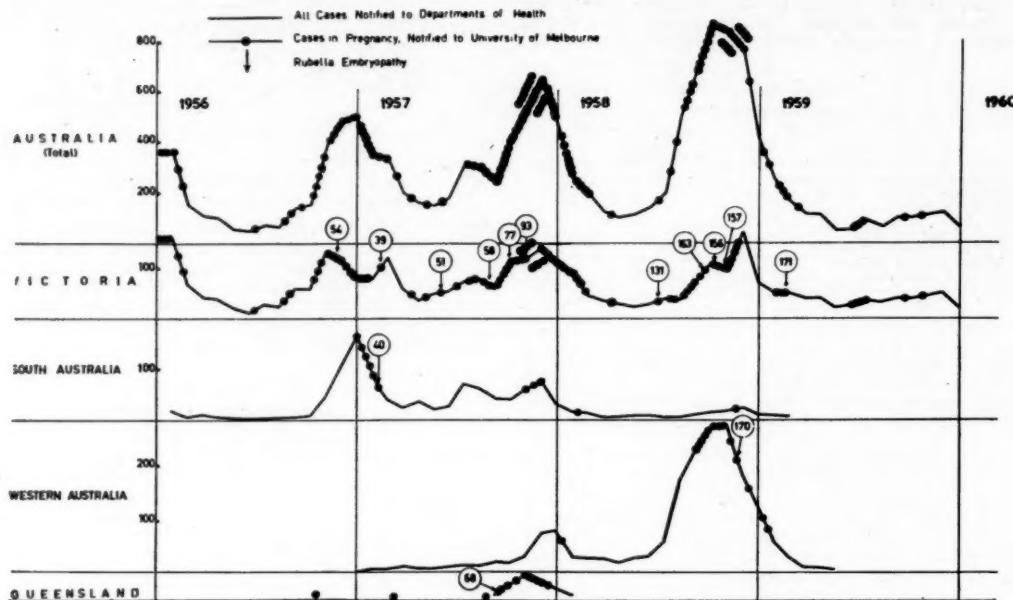


FIGURE II.
Rubella in Australia, 1956 to 1959.

days, and the average duration of arthralgia 4.7 days. The most common sites of pain were the wrists and fingers, though occasionally the knees (two cases), hips (one case) and neck (one case) were involved.

TABLE VII.
Age and Parity.

Subjects.	Mean Maternal Age. (Years).	Mean Family Size.
Embryopathy group (14)..	28.8	2.6
All cases (145) ..	26.2	2.9
Population of Victoria ..	27.97	2.56

Vomiting was complained of in 15% of cases, but whether this was associated with pregnancy or with rubella it was not possible to determine. It is interesting to note that Swan in his early papers commented on the common frequency of vomiting, which suggests that this epidemic may have been a more severe type than the present ones.

Fever was mild in most cases, the highest temperature recorded at a casual reading by the doctor being 104°F. (oral). The mean of these observations was 100.8°F. (oral). Pharyngitis was sometimes observed, and an enanthem—usually a few red fine spots on the palate—was occasionally noted. The spleen was palpable in 2.8% of cases.

When the clinical features of the rubella were considered in the two groups (affected and unaffected infants), no significant differences were apparent. Nothing was found to suggest the presence in the affected group of either a more severe or a different type of exanthematous disease.

Blood Films.

Hillenbrand (1956), describing an outbreak of rubella in the Falkland Islands, gave an account of the white-cell count changes in a series of cases. He stated that a "full rubella" picture was to be observed: (i) monocytes, Türk cells and (especially) plasma cells abundant; (ii) lymphocytes and neutrophil leucocytes reduced; (iii) stab cells little increased; (iv) metamyelocytes scarce; (v) degenerate lymphocytes present.

It was decided therefore to have peripheral blood smears examined, either to confirm the foregoing observations and to strengthen the diagnosis of rubella, or to disprove them. The opportunity was also presented to look for the abnormal mononuclear cells typical of glandular fever; these were seen in only one case, in which a Paul-Bunnell test subsequently produced a negative result. The results of the examinations are set out in Table VIII.

No important differences were noted between the embryopathy cases (eight) and all cases. One feature noted in the general blood picture was the appearance in about half the cases of Türk cells (basophilic plasma cells), with an average percentage of 2.9. These cells are well known to occur in rubella, measles, chicken-pox,

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glandular fever and other infections. Although degenerate lymphocytes were also occasionally seen, no "full rubella picture" was seen, and these findings do not agree with those of Hillenbrand.

Maternal Anxiety during Pregnancy.

Information was sought about the emotional reactions of mothers who had rubella in pregnancy, but in whom the pregnancy was not terminated. The reason for the

moderate anxiety, and there were no cases of psychiatric breakdown. Of the two severely anxious mothers, one was disturbed because she consulted a second doctor just after her rubella, who told her "roughly" that her baby would be "blind, spastic or mongoloid", and tried to frighten her into termination of pregnancy. She was very upset, and her husband visited this doctor and complained. After reassurance by her own doctor, she decided to continue with the pregnancy, and had

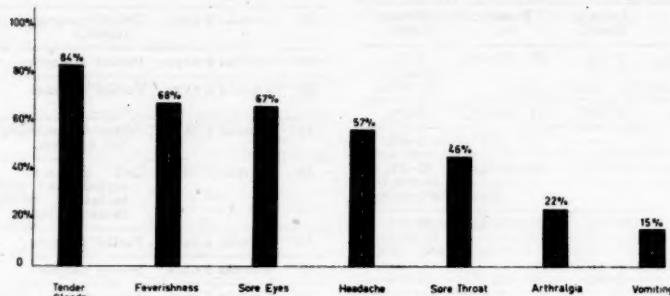


FIGURE III.
Symptoms of rubella (145 cases).

inquiry was to ascertain whether severe mental strain or psychiatric breakdown was common enough to have justified termination of pregnancy on the grounds of preserving the mother's mental health—the psychiatric indication. The questions were made retrospectively at

a normal baby. The other severely anxious mother was a highly nervous person, who unfortunately now has a child who is moderately to severely deaf.

In contrast to the foregoing history, other patients in category (ii) spoke warmly of the reassurance and

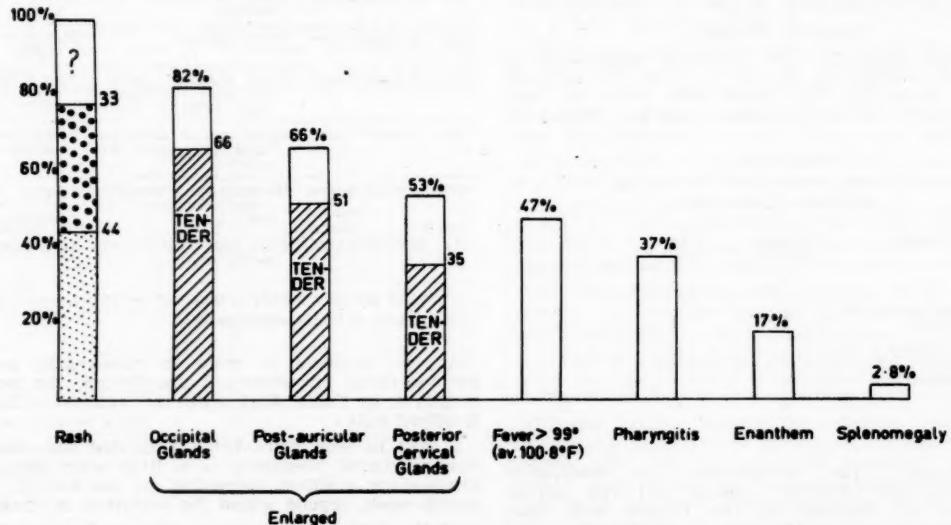


FIGURE IV.
Signs of rubella (145 cases).

about the time of the second examination of the child, when *rapport* was reasonably well established between the mother and the paediatrician. The replies were graded into four categories, as follows: (i) no anxiety; (ii) mild to moderate anxiety, not sufficient to require medical consultation and treatment; (iii) severe anxiety requiring tranquillizing drugs; (iv) psychiatric breakdown. At the time of writing, 53 mothers had been questioned by the writers, and the results are set out in Table IX.

It will be seen that the great majority of patients passed through their pregnancy with no more than

support they had received from their family doctors, and this study confirms the value of a good relationship with a doctor who is reassuring and optimistic. Further reassurance had been given in some cases by consultants, and in 19 cases by the chief author. This reassurance was given on the basis of a risk in the first trimester of 10% to 20%, which was the information available at that time (1957-1958). At this stage the higher risk for the first four weeks was not known.

When seen subsequently during the paediatric follow-up, the majority of these mothers appeared to have good mental balance. From the experience of this survey, no

evidence emerged that the contracting of rubella in pregnancy inflicted unbearable psychic trauma on the mother. On the contrary, the need for, and value of, reassurance and support by the doctor were emphasized.

TABLE VIII.
Blood Film in Rubella.
(55 Smears.)

Cells.	Embryopathy Cases (8).		All Cases (55).	
	Present in.	Average Count.	Present in.	Average Count.
Monocytes	5 (62.5%)	2.6%	40 (72.7%)	3.3% (normal, 2%-10%)
Türk cells	4 (50%)	4.75%	21 (38.2%)	2.9%
Plasma cells	—	—	2 (3.6%)	3.5%
Lymphocytes	8 (100%)	48.75%	55 (100%)	39.5% (normal, 20%-50%)
Neutrophils	8 (100%)	46.5%	55 (100%)	49.0% (normal, 40%-75%)
Stab cells	1 (12%)	2.0%	36 (65.4%)	12.9%
Metamyelocytes	—	—	—	—
Degenerate lymphocytes	2 (25%)	3.0%	5 (9.1%)	3.2%
Eosinophils	—	—	29 (52.7%)	2.5% (normal, 1%-6%)
Abnormal mononuclear cells	—	—	1 ¹	5.0%

¹ Paul-Bunnell test, negative result.

Paediatric Results.

The present findings in the follow-up examination of 18 abnormal children are set out in Table X and summarized in Table XI. The latter table omits the four cases in which the malformation was not typical of

TABLE IX.
Maternal Anxiety following Rubella in Pregnancy.
(68 Mothers Questioned.)

Degree of Anxiety.	Abnormal Children.	Normal Children.	Total.
No anxiety	2	4	6
Mild to moderate anxiety, not requiring treatment	3	42	45
Severe anxiety (treated)	1	1	2
Psychiatric breakdown	—	—	—
Total	6	47	53

rubella damage. The observations are necessarily incomplete for the following reasons: (a) The cardiac diagnosis is not finalized in two infants with loud systolic murmurs (Cases 157, 170). (b) The incidence, and severity where diagnosed, of deafness, cannot yet be stated in the more recent group of infants. (c) Minor defects, such as rubella retinopathy and dental anomalies, have been omitted.

The significance of the foregoing observations cannot be properly assessed for at least another two years, when final reports will be published, covering the medical, ophthalmological and dental aspects.

On the basis of the present observations, it can be stated that the risk of a major congenital malformation due to maternal rubella in the first trimester is, in this country, at this time, of the order of 21.4%. This is about four times the normal incidence (McIntosh, 1954).

On studying the risks of embryopathy according to the week of gestation (Table XII), we see that there is a gradient operating from what appears a maximum risk occurring up to the end of the fourth week after the last menstrual period.

TABLE X.
Rubella Survey—Abnormal Children (1960).

Case No.	Rubella in Pregnancy. ¹	Diagnosis.	Remarks.
37	5 weeks 5 days.	Chronic pneumonia, cardiac failure. ²	Died at six months. Autopsy report.
39	8 weeks 2 days.	Partial deafness.	Confirmed at 3 years.
40	8 weeks 6 days.	Partial deafness.	Diagnosed at 18 months.
51	7 weeks 4 days.	Pulmonary stenosis; partial deafness.	Deafness diagnosed at 18 months ³
54	3 weeks 1 day.	Left cataract; microcephaly and mental retardation; valvular pulmonary stenosis.	Hearing normal at 3 years; mental age 1.5 to 2 years.
58	8 weeks 4 days.	Partial deafness.	Using hearing-aid.
68	8 weeks 3 days.	Severe deafness.	Aged 2 years.
74	13 weeks 3 days.	Right inguinal hernia. ⁴	Otherwise normal at 2.5 years.
77	14 weeks 6 days.	Partial deafness.	Aged 2 years.
82	29 weeks.	Brain-damaged; mentally retarded, epileptic. ⁵	Cause unknown.
93	8 weeks.	Patent ductus arteriosus, atrial septal defect.	Neonatal death.
131	7 weeks 1 day.	Left congenital hydrocephalus, severe deafness.	Good vision at 18 months.
154	14 weeks 3 days.	Right convergent strabismus. ⁶	Otherwise normal at 1 year.
156	5 weeks 2 days.	Severe deafness.	Diagnosed at 14 months.
157	4 weeks 2 days.	Right inguinal hernia ⁷ ; probable ventricular septal defect.	Aged 1 year.
163	3 weeks 1 day.	Patent ductus arteriosus, atrial septal defect, left cataract.	Post-operative death; autopsy report.
170	3 weeks 2 days.	Microphthalmia, cataracts, ? ventricular septal defect.	"Seeing well with glasses" (13 months).
171	10 weeks 3 days.	Right talipes valgus, ⁸ patent ductus arteriosus.	Aged 8 months.

¹ Period of gestation, calculated from first day of last menstrual period.

² Not typical of rubella embryopathy.

As the numbers of cases in very early pregnancy are too small for statistical significance, the series are combined in Table XIII with the summated figures of Bradford Hill.

It will be seen from Table XIII that the risk in the first month of pregnancy is a little over 50%, with a diminishing gradient thereafter to the end of the sixteenth week, beyond which the incidence is insignificant.

Of the major malformations diagnosed, deafness (eight cases) is the most common. At least five of these children are known to have only a partial hearing loss, and, being fitted with hearing-aids, should respond to speech training and be able to talk.

The next most common malformation, congenital heart defect (seven cases), comprises patent ductus arteriosus (three), pulmonary stenosis (two) and suspected ventricular septal defect (two). The incidence of heart defects due to maternal rubella (11.5%) is many times the incidence calculated in the general population (0.21%—Pitt, in the press), thus confirming the causal relationship of rubella.

All the cardiac defects listed above are types amenable to modern surgery.

Only two severe eye defects have been recorded in this series, both of which were unilateral. After operation, both children, in their second year of life, are said to see with both eyes.

Thus the majority of the congenital defects described above are partly or wholly amenable to modern medical treatment. Of the one condition not amenable to treatment—mental retardation—only one case was found in this series of 61 (first trimester rubella). The other

TABLE XI.
Rubella Survey—Summary of Abnormalities (October 1, 1960).

Diagnosis.	Cases.	Incidence in Survey.*	Population Incidence
Mental retardation (with left cataract and pulmonary stenosis)	1	(Mental defect) 1 (1.6%)	? 1%
Deafness alone	6	(Deafness)	
Deafness and pulmonary stenosis	1		
Deafness and left hydrocephalus	1	8 (13.1%)	?
Left cataract, patent ductus with atrial septal defect [†]	1	(Cataract)	
Microphthalmia, cataracts, ? ventricular septal defect	1	2 (3.3%)	
Patent ductus with atrial septal defect [‡]	1		
Patent ductus and right talipes valgus [§]	1		
? Ventricular septal defect and right inguinal hernia [¶]	1		
Total major defects	14	21.4%*	? 5%
Total congenital heart defects	7	11.5%	0.21%

* Neonatal death with autopsy.

† Not typical of rubella embryopathy.

‡ For first trimester.

children, as assessed by paediatricians on a careful study of the developmental milestone, are of average intelligence. Maternal rubella in the first trimester, therefore, appears to carry with it a risk of a mentally defective child of only 1.6%.

TABLE XII.
Risks of Embryopathy.

Period of Gestation. [†]	Total Cases.	Affected Infants.	Percentage.
First to fourth week	5	3	60.0%
Fifth and sixth weeks	4	2	50.0%
Seventh and eighth weeks	8	3	37.5%
Ninth and tenth weeks	13	4	30.8%
Eleventh and twelfth weeks	20	1	5.0%
Thirteenth and fourteenth weeks	18	—	—
Fifteenth and sixteenth weeks	19	1	5.3%
Seventeenth to twenty-fourth week	17	—	—
Twenty-fifth week	3	—	—
Total	107	14	—

* Calculated from first day of last menstrual period.

The incidence of mental deficiency in the community is probably about 1%. This figure is a combined estimate by Jervis (1959), based on several European surveys.

It therefore appears that maternal rubella is a very infrequent cause of mental deficiency. Though this has been known since the days of Swan (Swan, 1943), in only one-fifth of whose cases were the children "microcephalic", it is surprising to read a statement in 1959 by Jervis that "rubella infection of the mother during the first three months of pregnancy may result in mental deficiency of the offspring in a percentage varying from 20 to 70 per cent". It is completely

erroneous statements like this, together with the old-fashioned stigma that has been attached to mental deficiency, that has doubtless in the past swayed many doctors into performing unnecessary terminations of pregnancy. The actual risks are now better known. With the knowledge that most children born after rubella in the first trimester are quite normal, and that many rubella defects are amenable to therapy, medical opinion now emphasizes that it is the duty of the doctor to treat the rubella-affected child, and not to terminate its life.

TABLE XIII.
Combined Risks—Bradford Hill and Pitt.

Gestation Period. [†]	Bradford Hill.		This Series.		Risk (Both Series).
	Total Cases.	Affected Children.	Total Cases.	Affected Children.	
First to fourth week	12	6	5	3	52.8%
Fifth to eighth week	20	5	12	5	31.3%
Ninth to twelfth week	18	3	33	5	15.7%
Thirteenth to sixteenth week	18	2	37	1	5.5%
Seventeenth to twenty-fourth week	17	1	17	0	2.9%

* Calculated from first day of last menstrual period.

SUMMARY.

The incidence of congenital defects due to rubella in early pregnancy in various countries has been reviewed, and a wide variation noted.

An interim report is presented of a prospective series of 145 cases of rubella in pregnancy in Australia, observed during the years 1956 to 1959.

Maternal rubella most commonly affects women in their late twenties, who are having their third baby.

Over one-half of these patients had previously been in contact with a known case of rubella.

The epidemiology of rubella is discussed, and a detailed account of the clinical features is given, so that there appears to be no reasonable doubt that the disease reported was actually rubella.

The white-cell picture was studied in 55 cases, and, contrary to the experience of Hillenbrand, presented no special features.

No evidence was found that the severity of rubella varied between mothers of affected infants and mothers of normal infants.

Maternal anxiety during the relevant pregnancy was recorded by retrospective inquiry in 53 cases. Of these mothers, 45 reported mild to moderate degrees of anxiety, there being no cases of psychiatric breakdown. Those with the least anxiety appeared to be those who had received the most reassurance and support from their doctors.

Of the pregnancies in which rubella occurred in the first trimester, 61 children have been examined by paediatricians. Their ages at the time of writing vary from 12 months to four years. Thirteen of these children have been found to be rubella-damaged, an incidence of 21.4%. One case of deafness resulted from maternal rubella in the fifteenth week. The number of cases for the first four weeks of pregnancy is small (three affected children out of five). When considered with those of other recent workers, these results suggest that the risk of malformation is at a peak (52.8%) at this period of pregnancy, and thereafter it declines in a gradient which disappears at the end of the sixteenth week.

The commonest conditions found were deafness, congenital heart defects, and eye defects (in that order), the majority of which are wholly or partly amenable to modern medical treatment.

Maternal rubella is an uncommon cause of mental deficiency; only one case was found in this prospective series, an incidence of 1.6%.

A final report will be presented in about two years' time.

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THE STAFFING OF PUBLIC HOSPITALS.¹

By EDWARD S. STUCKEY,
President, New South Wales Branch of the
British Medical Association.

It is indeed an honour to be elected President of this important Branch of the British Medical Association. Like all positions of honour, it carries more than its share of responsibility. It is for this reason that it is a rule of this Branch that the office should rotate and a new president be elected each year.

It has become customary to select that member of your Council who is next in seniority as regards years of service on Council. The assumption, I suppose, is that, after being a member of Council for a number of years, any member of the profession should be capable of being not only a good chairman of meetings, but also a worthy representative at many civic and social functions, as well as a trustworthy leader in the solution of the numerous problems which inevitably crop up in the course of a year of office. This is a tall order. My friends, I can only say in all humility that I hope I do not let you down in the ensuing 12 months. I would like, however, to add that I take heart when I look back over my predecessors, some of whom are still my valued fellow Councillors, remembering how well each of them has acquitted himself; and also when I think of the unfailing help I know I can expect from our devoted secretarial staff. I can assure you that I shall not lack willing and valued help in the tasks before me.

One's first serious problem as your incoming President is the selection of a worthy subject for one's presidential address. I should have liked, as your leader, to be able to dazzle you with pearls of wisdom on some weighty subject about which I could speak as an authority, with you, my brethren, but humble pupils seeking enlightenment. I am afraid that is not to be. I have instead chosen to speak on a subject about which I know little, but about which I feel we should be willing to start our thinking anew, forgetting preconceived beliefs and old loyalties, in an effort to decide not only what would be best for the medical profession, but of greater importance, what would be best for our patients. The subject, about which I propose to submit some humble thoughts and suggestions rather than firm beliefs and recommendations, is the staffing of public hospitals.

The Staffing of Public Hospitals.

I wonder how many members of our profession, in their day-to-day activities, have given serious thought to the relationship of the profession to hospitals in general, and through the hospitals to the community at large and to the governments of the various States whose duty it is to build and maintain our public hospitals. How many of us pause to consider how hospitals are managed in other parts of our own State, in other States of Australia, or in overseas countries? How many of us wonder in what respect our own particular system of hospital management could be improved by adopting or by adapting systems in use elsewhere?

When one becomes a member of Council, it is not long before he or she realizes how many problems arise, both local and general, in regard to the profession's relationship with hospital management. In this State, at any rate, one also soon realizes how little the profession can do to solve such problems. In this State, practising members of the profession are excluded from the managing boards of individual hospitals (with few exceptions); more importantly, the organized profession is not represented on the Hospitals Commission set up by the Government to manage the hospitals throughout New South Wales. The most your Council can do,

¹ President's address, read at the annual meeting of the New South Wales Branch of the British Medical Association on March 23, 1961.

when problems arise, is to make representations to hospital boards or to the Hospitals Commission and hope to persuade them that our views are correct.

On the wider, Commonwealth, scale I cannot see that conditions of medical practice in this great country of ours differ so greatly from State to State as to warrant the great differences in methods of hospital staffing which exist in the different States. I suppose all your leaders in each State of the Commonwealth are not only aware, but always vaguely uneasy in the knowledge that an unfriendly State Government, acting through its public hospitals, is a far greater danger to the profession than any Commonwealth Government can be. The reason is simple. The Government of the Commonwealth has limited powers in the field of health measures, and, by referendum, cannot conscript the medical profession; but each State Government has sovereign powers over its hospitals, and without access to hospitals the profession cannot function. This is a sobering thought. I believe that one of the tasks of our Federal Council should be to try to evolve a national hospital policy, broad enough and general enough in its pronouncements to be acceptable to the profession in all States, in which both the rights and also the duties of the profession in its relationship with public hospitals and the patients therein should be clearly defined. It would perhaps be merely a pious blueprint of what should be, but it would be a powerful rock from which the profession in each State could refuse to budge in bargaining with State Governments.

However, before we can expect Federal Council to draw up any such hospital policy, it becomes necessary to consider the methods of staffing of hospitals within our own State, and try to decide in what manner these need alteration to meet present-day conditions.

Hospitals fall naturally into several groups—for instance: (i) district hospitals in country towns where there are few doctors; (ii) larger hospitals, such as base hospitals and suburban district hospitals; (iii) greater community or city hospitals; (iv) university teaching hospitals. It is obvious that what is best for one group may not be best for another. Methods of staffing also fall into several categories, such as full-time salaried staff, part-time remunerated staff and part-time honorary visiting staff, and again it is likely that in a particular hospital there may be a place for more than one category. It is impossible, therefore, to lay down a general policy which is appropriate for all hospitals or for all types of professional appointment.

The Physician and the Hospital.

At this stage I consider it wise to reflect in very general terms on the relationship of the medical practitioner to the hospital, or hospitals, in which he desires to work, before making any detailed suggestions appropriate to particular types of hospital. A hospital may be regarded from two entirely different points of view. It may be regarded as the doctor's workshop, without which he cannot efficiently care for his patients; but it may also be regarded as the sick person's sanctuary, where he or she can expect to receive, both as in-patient and as out-patient, the highest standard of professional care that a given community is capable of rendering to him.

As medicine has become more and more scientific, it has been inevitable that "The hospital has become the medical centre of the community, and one of the reasons why membership on the medical staff is of such great value to the physicians is that it makes available certain essential facilities, the cost of which would be prohibitive if it were necessary for each member to provide them individually". I quote from a very thoughtful American book entitled "The Medical Staff in the Hospital", by T. R. Ponton, published in 1955. I wish to make several further quotations from Dr. Ponton's book at this point:

The Governing body is the servant of the community in the sense that, when members assume office they become responsible for seeing that the hospital renders adequate service to the sick, and, in fulfilling this obligation, the most important responsibility assumed is that for providing a medical staff, and for being certain that it is functioning in conformity with certain standards which the community has a right to expect.

In granting and accepting appointment to the medical staff, there is no favor conferred on either side. Conditions of modern medicine are such that the physician must have a hospital in which he may practice; on the other hand the hospital cannot exist without its medical staff. Both the hospital and the physicians are uniting for a common purpose, the alleviation of human suffering and the restoration of health, and this purpose has no regard to the financial status of the patient.

In the hospital the medical staff is self-governing in so far as internal affairs are concerned, but it contacts other parts of the organisation, over which it has no control; it has outside relations which influence the entire hospital; and in the professional care of patients it assumes certain responsibilities for the proper fulfilment of which the governing body has an obligation to the community. It is for these reasons, among others, both legal and moral, that all authority is centred in the governing body.

The hospital being essentially a medical institution, the governing body is not qualified to determine policy in many matters because of their professional nature. It must therefore call on its medical staff for advice, and that body should always be willing to act in an advisory capacity.

Like the board of directors of any corporation, the governing body selects and employs an administrator to manage the institution. The administrator, therefore, represents the governing body, fulfilling its responsibilities and assuming its obligations. He must be assured that the medical staff is securing results which conform to approved standards and are in accordance with the policies laid down by the governing body.

In administrative matters all those connected with the institution, including the medical staff, must abide by his decisions; otherwise his administration is foredoomed to failure.

On the other hand:

The administrator, even though he himself be a qualified physician, is therefore not justified in interfering with the care of the patient. He must, however, be assured that this care is up to standard, an assurance which he will receive through the regular channels of the medical staff organisation.

I do not think any party to this conception of joint hospital responsibility and management should find fault with the general aphorisms I have quoted. It is clear, therefore, that in his work within the hospital the medical practitioner has not only important privileges but also important obligations.

Staff Organization.

In this country, the medical profession has succeeded in adopting and perpetuating an extremely individualistic approach to staff organization within the hospital. In our larger hospitals, particularly teaching hospitals, there are regular meetings of the medical staff which discuss general policy on professional matters and make recommendations to the board of governors, these being arrived at by democratic vote of all members of the staff. However, there is practically no attempt made to assess the results being obtained by individual members of the staff in the management of their patients, or to lay down what procedures any individual member may or may not undertake in patient care. In our smaller hospitals, there may be special staff meetings from time to time in order to advise the board on matters of

medical policy, or to raise grievances for submission to the board in the hope of improving conditions of service; but there is no attempt to interfere in any way in the professional work being done by any individual member.

In fact, in hospitals, both large and small, the board of governors has no assurance whatever that the medical staff is securing results which conform to approved standards, or that each patient is being treated with the degree of efficiency and safety that the patient has a right to expect. This is a weakness in our system which, in my opinion, the profession must attempt to correct if we wish to avoid more direct government interference in the practice of medicine within the hospitals. It is quite unrealistic for the profession to expect to avoid nationalization of hospital services if it is unwilling to assume its obligation to the community in this respect.

In the United States of America there are many variations in methods of hospital staffing; but it is probably true to state that in all except small country district hospitals, the "continental" system of staffing is the pattern. In this system there is a chief of staff, and a chief of each main service, such as general medicine, general surgery, radiology, pathology and other specialties, and both senior and junior members of staff work under general direction up to a point. Furthermore, the performance of each member, in regard to the end results of his treatment, is subject to the critical review of his peers and discussed when necessary at staff meetings. Continued appointment or promotion depends on satisfactory performance and ethical conduct.

Under such a system it is the more senior "active staff" members alone who lay down policy, and a lot of power is vested in a few individuals. A great deal depends on the character and personality of the chiefs of services and particularly of the chief of staff. I am not suggesting that this system in its entirety should be adopted in this country, but I do suggest that the medical staff of all hospitals, both large and small, must in future take an active interest in the type of medical or surgical management being undertaken by its members and in the results being achieved. The only body of persons capable of carrying out such responsibilities is the medical staff itself as a body, or a committee of its more senior members, freely elected to this onerous task by their fellows.

Another big problem of staff organization is the place of full-time as opposed to part-time service. From the hospital management point of view, it is clear that the simplest method is that of full-time, salaried appointments; but it is not necessarily the best method. Such a system excludes from the general wards of the hospital the private practitioner, both general practitioner and specialist, and so deprives the patient of the right of treatment by the doctor of his choice. Further, it has the danger of rigidity and lack of breadth in the approach to treatment in general. The full-time staff becomes too parochial and is insulated from contact with the private practitioner, who is forced to work elsewhere in the same sphere of professional activity. There is also the danger that the administrative side of the hospital will interfere in the professional work of the salaried staff, who are no longer free to disagree.

I cannot believe that the widespread adoption of such a system is best for either the patient or the profession. I believe, however, that there is a place for a certain number of full-time appointments in many larger hospitals. For instance, in the fields of pathology, radiology and anaesthesia, where the services rendered are in the nature of ancillary aids to the physician in direct charge of the patient's care, there seem to be many points in favour of full-time staff appointments. It is also reasonable to have full-time appointments in certain other special fields of investigation and of treatment in which there is but little scope for private practice. There may well be a place also for one team of full-time men

working concurrently with part-time visiting staff in certain major branches of general medicine and surgery, at least in teaching hospitals, where the full-time team would be associated with the university as professors and associate professors. I think that the profession should not actively oppose such mixed staffing methods, but should regard them as interesting experiments in improving patient care, from which valuable lessons may be learnt.

There is an interesting variation of the full-time staff appointment, and that is the one known as a "geographic" full-time appointment. This is very common in American institutions, particularly teaching hospitals. Here the appointee spends all his working day at the hospital, but has the privilege of consulting rooms where he sees private patients, and the right to treat both private and public patients within the hospital. This has much to commend it.

When we come to consider part-time or visiting appointments, we immediately come up against the problem whether such appointees should receive remuneration, and if so, by what method. Before discussing this problem, I think it worth considering the place of part-time service in different types of hospital. In the smaller district hospital, particularly in the country town, it is obvious that the private practitioner must spend most of his time outside the walls of the hospital, and his hospital appointment must be on a part-time, visiting basis. I do not consider that there is any place for full-time staff in such a hospital. In larger hospitals, such as base hospitals and suburban district hospitals, I believe that there must also be an opening for all the practitioners in the district to serve on the hospital staff as general practitioners, on a visiting basis. If some of these local practitioners have the necessary qualifications for appointment as surgeon or physician, then they should be so appointed, again on a visiting basis. If there are no such qualified persons available, I can see no theoretical objection to the appointment of a full-time, salaried specialist in such fields as general medicine and general surgery, unless there is a larger hospital, with a qualified staff, within reasonable distance.

There are certain large community hospitals in major cities which are not associated with universities as teaching hospitals. In such hospitals it is the duty of the governing board to provide a fully classified staff of specialists, and to insist that all practitioners appointed to part-time positions are qualified to fill such posts. These positions should be open to men who practise privately within the district, but only if they have the necessary qualifications. There is a place in such hospitals for visiting specialists from further afield, if they are willing to devote the necessary time and attention to their patients. There is also a place for a visiting consulting medical staff, who are not directly in charge of beds, but are available for consultation and active help in management of difficult cases. There may also be a place in such hospitals for full-time salaried appointments in certain specialties, and I do not think that local practitioners should take exception to such appointments, if it can be shown that it is in the interest of the patients.

It is in this class of hospital that we first come to the problem whether such institutions should be open to all practitioners in the district, or only to the chosen, classified staff. In some cases it may be best to allow all local practitioners appointment as visiting medical officers, but with limited privileges in regard to special forms of medical and surgical treatment. It is probably better to exclude those local practitioners who cannot qualify as visiting surgeon or physician—but only if the community provides some smaller district hospitals within which such men may continue to treat their patients.

When we come to teaching hospitals, I think all will agree that, at least as regards the general wards, there must be a closed staff. The staffs of such hospitals

must all be qualified to be appointed to classified positions, and further they must be considered suitable both by the hospital board and by the university. Their duties comprise not only patient care, but the teaching of students. It is in such hospitals, in particular, that a judicious mixture of part-time and full-time staff is not only reasonable but probably advisable. It may even be better that some such hospitals be staffed in regard to major specialties mainly by geographical full-time specialists designated professors and associate professors. In such institutions the system of chief of staff and chiefs of services has much to commend it, although I would allow all members of such services, down to the most junior, the privilege of voting on matters concerning professional policy.

Classification of Patients.

You will perhaps have noted that so far I have skillfully avoided debating the merits and demerits of payment for visiting part-time staffs in hospitals. I think some consideration of the problems of classification of patients is a necessary preliminary. This is a worldwide phenomenon. Ponton, whom I have previously quoted, writes:

Patients admitted to the hospital may be divided into two classes: those who are able to pay for their hospitalisation and professional care, and those who are not. Regardless, however, of their financial status, they have one common right; they are sick individuals who are seeking a return to health, and they entrust themselves to the hospital and its medical staff in furtherance of this objective.

Also:

For centuries it has been the tradition and the custom of the medical profession to render free service to these [indigent] patients, and consequently physicians have carried more than their share of the community load, a condition which has always existed and probably will continue. In a few States, through one or other of the governmental agencies, the physician is partially compensated for his services but, unless there is some such arrangement, each member of the medical staff enters into an agreement with the governing body to do his share in caring for the indigent sick of the community without compensation from any source.

In these days, when a large percentage of the community is partly covered against both hospital and medical expenses by insurance, it is time to review our present systems of classification of patients. In my opinion each patient should be classified from two different points of view—namely, that of accommodation and that of medical charges.

First, as regards accommodation, I believe we should persuade our governmental bodies to look on a hospital as a special type of hotel, in which there is a basic minimum or standard of hospital, as opposed to medical, service. This should comprise a reasonable standard of personal care as regards board and lodging, adequate nursing commensurate with the type and severity of the illness, and such other services as the hospital itself provides, including, perhaps, laboratory investigation and radiology. For this the hospital should charge the patient a basic tariff, unless he is declared unable to meet the cost. The hospital should also provide more intimate semi-private and private rooms, in which all those who choose to be so accommodated will be charged a higher tariff to cover the extra attention and privacy demanded. Admission to such beds should be entirely voluntary, and should have no connexion whatever with the patient's responsibility for medical fees. It will depend largely on the amount of hospital insurance which the patient has. As a corollary to this, it is obvious also that the patient in a general ward should in many cases be responsible to his medical attendants for their fees. I am informed that this system obtains in most of the Provinces of Canada, and it seems an eminently satisfactory arrangement from both the hospital's and the medical attendant's point of view.

Medical classification of patients should bear no relationship to the ward occupied, but should concern only the patient's ability to meet his medical expenses. Just as certain patients will be classified as indigent from the point of view of accommodation, so will certain patients be classified as unable to pay for medical attention. There must be a means test to determine this inability to pay. There can be no objection to the basic hospital charges of indigent patients being paid to the hospital by government grant. Equally there can be no objection to a paternally-minded government, whether State or Federal, paying the medical profession in whole or in part, for looking after such indigent patients if it so desires—provided that it has negotiated with the profession a mutually satisfactory method of payment. In the absence of such provision for payment, the profession should continue to attend such patients to the best of its ability without remuneration from any source.

The next class of patient, from the medical point of view, should be the one who, even though he may be classified as indigent from the point of view of accommodation, is covered by some form of medical insurance up to certain limits. Such patients should be classified as insured patients, and I submit that the medical attendants of such patients should be entitled to charge a modified fee, which would bear some direct relationship to the amount of benefit the patient is entitled to receive from his insurance organization. There can be no ethical objection to such classification. I know that our State Government maintains that this would amount to penalizing the thrifty; but the answer should be that it is unethical for the hospital to receive insurance or other benefits for such patients if the doctor is not also entitled to do the same.

Finally, there is the patient who, by virtue of adequate insurance or private means, is judged able to pay in full for his basic general ward accommodation. All such patients should also be responsible for medical expenses, the amount charged being a matter purely between the patient and his medical attendants, and no concern of the hospital.

Payment for Part-time Visiting Attendance.

We finally come to consideration of the kernel of this problem: what is to be the future of the honorary system of hospital staffing? I believe that if the steps already suggested in regard to classification were adopted, this problem would quietly solve itself. The present system of classification in this State, whereby the doctor is precluded from charging a patient unless he has been classified as ineligible for general ward accommodation, is an imposition on the patient's right to choice of accommodation, and amounts to exploitation of the profession, in that doctors are compelled to treat without charge many patients who are both able and in many cases willing to pay for medical expenses, certainly within the limits of their medical insurance. The medical profession must fight against exploitation and must demand the right to be paid a fair fee by all those who can afford to do so.

In studying the hospital staffing systems in other States and other countries, I have been most impressed by the Canadian hospital organization. Canada, like Australia, consists of a Federation of Provinces or States, and hospital organization varies somewhat from one Province to another. Nevertheless, there is a basic similarity, and I should like to outline what obtains in the Province of British Columbia as an example.

In British Columbia the cost of hospitalization is covered directly by the Government. It is financed by a 2% sales tax on nearly all commodities. The patient himself, when admitted to hospital, is called on to pay only one dollar per day for general ward accommodation. He may remain in such a ward irrespective of his financial status; but if he chooses, he may seek semi-private or fully-private accommodation, by paying five or eight dollars per day. Hospital charges cover

all general hospital care, including X-ray examination and pathological investigations. With regard to medical expenses, most patients are billed directly by their medical attendants, irrespective of the ward occupied. The well-to-do pay full private fees, but many patients in the lower income group have their fees paid direct to the doctor by Blue Shield insurance organizations. The amount to be paid in such cases is on a fee-for-service basis, according to an agreed scale of fees. The patient who is classified as indigent from the medical point of view has his medical expenses met in part by a government grant. The method is by an annual grant, which is distributed to hospitals according to average bed-occupancy, and further distributed within each hospital by a committee to which each doctor submits his accounts, on a fee-for-service basis. The proportion of his fee so met varies, but averages 50% to 60% of an ordinary private fee.

I consider that a more detailed examination of this system, and of those of other Canadian Provinces, should be made by the profession in Australia, and by the Governments of Australian States, in an effort to evolve a more satisfactory system of hospital financing and staffing than we have at present. The present position in New South Wales, in which, although over 70% of the population are said to be covered by both hospital and medical insurance, doctors are being forced to continue to render honorary service to quite a large percentage of the population, is becoming more and more intolerable.

By all means let us continue to give honorary service to those who are unable to pay for their medical attention, but only to those who are genuinely unable so to do. However, if some satisfactory scheme is evolved by which we are offered payment for what would otherwise be honorary service, let us not scorn such remuneration on the ground that honorary service is sacrosanct. Let us remember that the English honorary system, on which our present system was based, has completely disappeared, and that in some other countries, by virtue of prepayment insurance, it has dwindled to very small proportions, or has even been eliminated by social welfare measures on the part of governments, who are committed to the proposition that the medical profession should no longer be exploited in this regard.

Conclusion.

In conclusion, it must be obvious to you that there are many facets of the problem of hospital staffing which I have not had time to consider, and that I have made only a cursory survey even of those facets which I have considered. My plea is for a new look at the whole problem, and a new attempt to persuade our State Government to modify its present policies in regard to hospital staffing and patient classification in the light of present-day conditions. I regard the problem of the profession's relationship to public hospitals as the most unsatisfactory medico-political problem at the present time, and consider that it is a problem not only for our State Branches, but also for our Federal Council, because it is the Achilles' heel through which the right to carry on the practice of medicine in a private capacity may most easily be destroyed.

BEHAVIOUR DISORDERS IN CHILDHOOD.¹

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In any general practice there are a considerable number of children suffering disorders of behaviour requiring long-term therapy. These manifestations are conveniently

¹ Read at the Australian College of General Practitioners Convention in October, 1960, at Melbourne.

grouped into primary behaviour disorders, psychosomatic disorders, conduct disorders and those with an organic component (see Appendix I, adapted from the Ealing Child Guidance Clinic).

In 1960 a survey in Western Australia revealed that, whilst about one-quarter of all children remained symptom-free, the remainder showed disturbances which would not necessarily disappear as the child matured. Apley (1960) in Bristol, in a long-term follow-up of children with abdominal pains, has confirmed their frequent persistence into adulthood. One's own consulting room histories record the childhood origin of many adult neuroses.

Each year about eight of our children will be charged with some anti-social conduct in the Children's Courts. Many others either evade arrest or do not have their misdemeanours reported to the police. The available evidence would indicate that the average practitioner in any one year could be assisting at least 50 children, or about 10% of the child population. However, the majority of these children will receive inadequate assistance, unless one undertakes special means of case detection, diagnosis and therapy.

COMMUNITY EDUCATION IN CHILD-REARING PRACTICES.

In considering the education of the community in child-rearing practices, the effectiveness of any measures may well depend upon the projection of the doctor's personal sense of values by daily contact with his patients. It is useful to keep in one's mind the ideas of other educational centres, welfare clinics, kindergartens, schools and consultant services. Publicity should not arouse unnecessary anxiety.

American experience of this type of work (Brofenbrenner *et alii*, 1958) indicates that basic ideas become assimilated very widely, although many authorities seriously doubt if parental attitudes are in any way affected by such education. To put it in another way, parents hear of certain ideas, but still cling to their own methods in child rearing.

It is apparent that the whole of society needs reeducating about the needs of certain children. With this in view, the three practitioners of my own community have undertaken some lectures to various groups of parents. We are trying to project widely a humane image of the family doctor, who in turn is educated by the experience. We feel that it is not sufficient to assume that if we remain silent our patients will automatically attribute doctors with upholding the virtues of love, kindness, humanity and tolerance or wisdom. We hope in a few years to arrange for the sociologists to measure the public reaction and absorption of these ideas. This may reveal two things: (i) what people think of us; (ii) any possible changes in their attitudes towards child rearing. I believe that if doctors were often associated publicly with certain virtues it is probable that their own personal standards of behaviour would benefit. In small communities the behaviour of the doctor's own children does not escape the notice of the public. The lectures are at present given to several groups. The first group comprises the majority of expectant mothers. All patients in the area may attend an eight-lecture ante-natal course, one lecture of which deals with the emotional care of children. The practitioners incidentally are not in partnership. All adolescent school children in their final year receive two lectures annually. The assumption is held that it is of value for children to hear from the doctor the present concepts of good emotional health. Various other groups, including parents and citizens' associations, church unions and mothers' clubs, have been given lectures and informal discussions with audience participation. We try to avoid dogmatic projection of our ideas.

The publication of articles in the Press has been commenced, although we consider this a poor method of changing parental attitudes. Monographs are available at the consulting rooms and post-natal wards for impulse buying. Young mothers are usually grateful of a recommendation of a suitable home guide of normal child

development. Two examples are "Baby and Child Care" by Benjamin Spock and "Child Behaviour" from the Gasell Institute.

One can only guess at the most effective means of helping parents. Daily personal contact with patients holds most promise for the future, provided the doctor has been trained for such work. We hope that at least there will be a wider awareness of the needs of certain children in this community.

THE DETECTION OF EMOTIONALLY DISTURBED CHILDREN.

The number of children referred to the physician will depend upon the energy and thoroughness of the community's education, particularly in the schools. The areas of referral in probable order of their importance are as follows: schools, child welfare agencies, kindergartens, siblings (children already under treatment), parents themselves and finally the physicians' observations in their consulting rooms.

The schools are the most important areas of case detection. Initially, the school teachers were notified of the needs of certain types of children by short informal discussions. Virtually no cases were referred. As a previous survey had definitely detected many disturbed children as yet unreported by the school, a more determined effort was made to acquaint teachers of the type of child needing aid. This was facilitated by the supplying of all teachers with a list of manifestations of disordered behaviour (Appendix II). The headmasters were then notified of many children previously accepted as within normal limits. Careful screening of all children showing retarded learning has revealed other cases. In one school of 720 pupils, 127 children have been filed by the headmaster as probably needing assistance. Approximately one-third appear to be chiefly the concern of the educational psychologist.

The remaining children and their parents need referral to their doctor through the medium of the headmaster. It is unfortunate that at present only a few of these children have so far been referred for medical help, but there are a number of reasons for this state of affairs.

The Guidance Branch of the Department of Education has psychologists whose training has been chiefly concerned with educational, rather than with clinical behaviour problems. Despite their careful evaluation of many of these children, few cases have been referred, either to the family doctor, or to a child guidance clinic.

Two policy decisions are necessary before this will take place. Firstly, the British Medical Association and the College of General Practitioners should officially support the views of the child guidance clinics, that these children should be referred to qualified medical personnel.

Secondly, education departments should instruct headmasters that parents of children who attract their attention by behaviour disorders should seek the advice of their family doctor exactly as if the child had an organic disease. It should automatically follow that education departments should advise their guidance officers to cease treating persistent emotional or emotional disorders in children.

It is a rare event for parents of children committing anti-social behaviour to be advised by the magistrate to take their child to a psychiatrist or to the family doctor. In half of these police cases, children are brought before the court for a second or third offence.

Kindergartens should be used more frequently for the early detection of young children in trouble. There is a tendency for teachers to be permissive about aggressive children in the hope that they will become socialized, thus delaying urgently-needed therapy.

It is always worthwhile screening the siblings of children already under therapy. Whilst this information is usually obtained by the physician, there is a natural tendency to do nothing about the rest of the family. However, it is frequently difficult to effect significant improvement in an older child's long-established disorder,

but younger siblings could benefit from improved parental attitudes in child rearing.

Finally, parents may become aware of the predominance of emotional factors underlying a psychosomatic disorder. The family doctor sees, for example, a great number of children with asthma, enuresis or abdominal pains, and it is his careful questioning that will determine whether the attacks are triggered by emotional disorders.

PARENTAL ATTITUDES IN CHILD REARING.

In assessing environmental influences in behaviour, it is useful for the doctor to summarize some of the factors at present widely presumed to influence child behaviour. The taking of a good history reveals information, but also simultaneously may give parents insight about their motivations. It is important to know that the motives of parents towards their children are more important than the apparent, observed methods of dealing with them.

The physician should not directly point out possible errors of management, as the use of non-directive techniques offers the best chance of effecting changes in parental attitudes towards children. The following summary of present-day views in child rearing may be of assistance.

Desirable Qualities.

Doctors should advocate a middle course in child guidance. Parents should try to achieve honesty with their children, accepting their children, respecting their rights, giving them consistent management, love, warmth, praise, reward, security, some privacy and timely punishments and rewards. They should show permissiveness in the early life to the major drives of hunger, elimination, dependency, sex and aggression. They should encourage their children towards early self-control. They should show courtesy towards their offspring, and realize that identification by the child with its parents' desirable qualities is an important part of a child's rearing. They could well teach the value of courage and self-discipline.

Undesirable Qualities.

Parents should avoid extremes of management, such as deceit, dishonesty, excessive rigidity, "smother love", over-protection and the production of insecurity. They should beware of the identification by the child of apparent parental traits of inconsistency, dishonesty and instability. They should avoid maternal deprivation and excessive submissiveness to children. They should avoid premature forced feeding, toilet training and the correction of masturbation. Inconsistent and unreliable management should be avoided; the child's undesirable behaviour will not be eliminated by punishment unless the desired training replaces former habits. They should avoid frustration in children and over-gratification of the child's desires. They should try to minimize the child's absence from home during the first five years of life, particularly avoiding separating the young children from their mothers.

DIAGNOSIS.

The first step in the diagnosis of the disturbed child is to obtain a volunteered history from the parents. Repeated consultations are required adequately to reveal the essential facts. These interviews are also the beginning of therapy, provided that the physician patiently uses non-directive techniques.

In order to screen a wide area of the child's behaviour disturbances a structured history guide (see Appendix II) will be used by the family doctor. If a patient with a psychosomatic disorder is screened in such a manner, the important symptoms can be rapidly recorded.

A family developmental history should be obtained together with the interpersonal relationships between the parents, between parents and children, and between siblings.

The interviews with the child are important. They should take place at first in the presence of the parent

and later after the parent has retired to the waiting room. The reason for the visit must be explained to the child if he is old enough. The information derived from the interview is naturally dependent upon the training and skill of the physician. The child should be invited to come for further visits.

A report from the school concerning the standards attained in school work and social conduct may be useful. It is likely also that general practice will make increasing use of social workers and the reports from the home.

A careful physical examination in the parent's presence is essential. The acceptance by the parent of the correct nature of the diagnosis will depend upon the skill of the physician in correctly excluding organic disease as a basis for the presenting symptoms. If an error of judgement is to be committed, it is better initially that one is too thorough in excluding a physical basis for the symptoms. This may not matter, provided the physician finally states the correct opinion very clearly. On the other hand, if organic disease is frequently mistaken for a psychological disorder, the doctor may easily gain the reputation of dubbing everything as "nerves". This could be crippling in his efforts to assist large numbers of children.

Finally, it may be necessary to refer the patient to consultant psychiatric services.

At present the families of our community have to travel 150 miles to Perth for such aid. It is hoped that the future may provide an occasional rural visiting service, as consultant assistance is essential in the rational care of the more seriously disturbed children.

METHODS OF SUPERVISING TREATMENT.

When one is considering the causes of a child's disturbance, it is well to realize that inherited factors are probably the most important.

We are also concerned with the parents and with the relationship between the husband and the wife, the factors in the child and the incidental factors of the child's life in the family and at school.

One may briefly summarize the aims of therapy: discussions with the parents are designed (i) to enlist their confidence, and inform them on the nature of their child's misbehaviour; (ii) to allay their guilt feelings; (iii) to seek out the sources of their anxiety; and (iv) to try to relieve them and to offer them recommendations for correcting the child's difficulties. Personal experience of successful intervention in a number of cases strongly suggests that human behaviour can be modified for the better under certain circumstances. There is much to be learnt from inadequate assessment, follow-up and therapy in the cases of failure.

Guidance is facilitated by coordinating the activities of parents and school teachers. They jointly aim to assist the child towards solutions acceptable by society, by increasing his capacity to adjust to reality. There is no attempt to project the popular Press image of a happy life.

It takes time for schools and parents to gain confidence in one's judgement. We should at all times remain sympathetic in our attitudes. In the event of the necessity of giving extremely unpleasant advice to the parents, it is wiser for the consultant psychiatrist to relieve the physician and the headmaster of this task in order to permit continued *rappor* between the family and their physician.

In the long run it is preferable to avoid delay when informing the parents of their child's need for the care of a psychiatrist. They frequently do not take this advice very kindly, but will usually return when their child's behaviour shows no improvement. The delay may be considerable, but the responsibility for the next step lies then with the parents.

It may be obvious at the outset that the mother or the father of the child also needs the urgent attention

of a consultant psychiatrist. This possibility must be carefully considered in all parents of disturbed children. It is not an easy task to persuade most parents to accept this view, but when met with a refusal, we should still offer to help them to the best of our ability. Parents must not be criticized if they do not cooperate concerning their children or themselves.

It is in the event of family crises, such as death, illness, divorce or desertion, that the family doctor can play a straightforward but vital role. Timely intervention can offset ills in younger children if they are given support and encouragement, particularly upon the death of their father. It is in these instances that we can offer a father-substitute similar to that provided so successfully by the Legacy movement. The care of the baby whose mother suffers an acute puerperal psychosis is another difficult but critical task affecting the baby's subsequent development.

We should try to arrange reasonably adequate mother-substitutes during all other maternal sicknesses or absences, particularly if the child is under the age of five years.

The handicapped child is another problem, illustrating the importance of educating the parents about their own attitudes. In this instance I refer to the common feeling of guilt in parents. It is a good example of how an inherent or genetic abnormality in a child will cause certain parental attitudes. Perhaps too much is heard about parental attitudes causing certain abnormalities in children.

Parents are rarely grateful to us when we point out their errors in child rearing. Remember, we may also, on occasions, be misguided in our assessment of the situation.

Nevertheless, effective therapy is frequently dependent upon changes in parental attitudes. Parents should gradually be made aware that it is through their own efforts that their child will progress favourably. It may be quite harmful to acquaint them too early with our own ideas.

There is a great need for patience in this sort of work. There are inevitable frustrations, delays and serious setbacks with many cases under review, and it is here that gentle persistence is most needed. We, as general practitioners, are best suited to the adoption of the technique of self-orientation, by which the patient gains insight, rather than the direct telling of the patient what is wrong with him.

Optimism is a valuable therapeutic weapon, as the parents of these children need an encouraging outlook by their doctor. In general, disorders such as migraine, enuresis and convulsive disturbances disappear spontaneously, as will a host of lesser temporary behaviour disturbances. Our aim is to treat the cause of these disturbances if we know them, as well as the presenting symptom.

It should be one of the physician's functions to review, at regular intervals, the progress of all children brought to his notice. Someone must care about them, at times, for a period of years. This paper details some of the ways in which any family doctor, regardless of his training, may assist these children. It need hardly be stressed that good long-term results demand skill, orientation and application by the physician that are not easily acquired.

The College of General Practitioners could well press for the establishment of adequate post-graduate training facilities in this challenging but fascinating field of general practice.

Summary.

Emotional disturbances in children need the combined efforts of educators and physicians for adequate case detection and therapy.

Public education concerning the needs of disturbed children has been fostered by lectures to selected groups

of parents, expectant mothers and school teachers, and by the making available of monographs and Press articles.

Personnel in schools, children's courts, kindergartens and welfare clinics, as well as parents, have been encouraged in early case detection. As a result, many children in the community are now known to need assistance. The majority of these children are not, as yet, being referred for therapy to a psychiatrist or to their family doctor.

The Department of Education could instruct headmasters to refer children suffering from behaviour disorders just as they do in the case of pupils suffering from organic diseases.

A systematic approach to some of the problems of diagnosis has been outlined. Non-directive techniques are desirable in order that the diagnosis may be assessed and simultaneously therapy commenced.

Current concepts in child rearing have been summarized. These are considered useful for the family doctor when he is undertaking case studies.

Some therapeutic principles have been outlined, which stress the role of consultant psychiatric services, and the straightforward situations in which any family doctor may assist disturbed children.

The view is put forward that the general practitioner, by virtue of the large volume of his case work, and the special position in which he stands, is well situated for participation in long-term child guidance. The physician's future efficiency in this type of work demands better post-graduate instruction.

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APPENDIX I.

Structured Interview Guide.

Primary Behaviour Disorders

A. *Fears and Anxieties*.—(Four years and older) of animals, dark, transport, other fears.

B. *Solitariness*.—Extreme introversion, unsociability, shyness (nine years and older).

C. *Depression or Lethargy*.

D. *Difficulty in Home Management*.—Disobedience or defiance.

E. *Difficulty in School Management*.—Dislike of school or teachers; refusal to attend (nine years and over).

F. *Temper Tantrums*.—Breath-holding attacks (three years and over).

G. *Aggression*.—Biting, scratching, kicking, destructiveness.

H. *Sexual Difficulties*.—Masturbation (four years and older).

I. *Head Banging*.—Rocking and rolling (three years and older.)

J. *Showing Off*.—Marked (seven years and older).

Psychosomatic Disorders.

K. *Periodic Syndrome*.—(Four years and older) abdominal pains, headaches, vomiting, diurnal limb pains, stiffness.

L. *Eczema or Dermatitis*.

M. *Asthma*.—Mild, moderate or severe.

N. *Speech Disorders*.—Stammering (six years and older), reading or writing difficulty (nine years and older).

O. *Elimination Disorders*.—Enuresis, diurnal (three years and older), nocturnal (five years and older); encopresis, diurnal (four years and older), nocturnal (four years and older).

P. *Eating or Drinking Disturbances*.—Obesity (eight years and older), food fadisms (eight years and older), polydipsia, polyuria.

Q. *Sleep Disorders*.—Night terrors, sleep-talking, sleep-walking, crying at night.

R. *Habit Disorders*.—Thumbsucking (five years and older), blinking, shrugging, hair-pulling, nose-picking, lip-sucking.

S. *Hysterical Symptoms*.—Paralysis, blackouts, fugues.

Delinquent Behaviour.

T. *Repeated Stealing*.—(Six years and older).

U. *Repeated Lying*.

V. *Truancy or Absconding from Home or School*.

Disorders with an Organic Component.

W. *Epilepsy*.—Petit mal, grand mal, temporal lobe epilepsy.

X. *Spasticity*.

Y. *Gastro-Intestinal Disorders*.—Diarrhoea, ulcerative colitis, peptic ulcer.

The Healthy Child should be Capable Of:

1. Playing with other children.
2. School work consistent with ability.
3. Remaining free of incapacitating symptoms.
4. Making and keeping friends.

Is your Child Capable of these Qualities?

APPENDIX II.

Children's Behaviour Deviations.

The following is a guide for the school teachers, who are urged to report to the headmaster any child who shows these traits in excess of the normal (qualitatively or quantitatively).

1. Disorders of habit, including speech difficulties, temper tantrums, nail-biting (severe), thumb-sucking and tics (shrugging, twitching).

2. Rejection of authority, manifested by defiance, insolence, impudence or sullenness.

3. Antisocial behaviour, such as destructiveness, stealing, truancy, undesirable recreations or undesirable companions.

4. Lack of normal aggression or withdrawal, manifested by crying, timidity, shyness, day dreaming, inattentiveness or dependence.

5. Excessive aggression, manifested by fighting, bullying, quarrelling, bossiness or cruelty.

6. Undesirable values, manifested by deceit, cheating, excessive laziness, indolence, smoking, gambling, profanity, obscenity, bragging and boastfulness.

Note.—A disturbed child usually displays more than one of these traits.

Reports of Cases.

INFECTION BY LEPTOSPIRA POMONA CONTRACTED FROM PIGS BY MOUTH-TO-MOUTH RESUSCITATION.

By K. E. GOARD, M.B., B.S. (Syd.),
 Molong, N.S.W.

Clinical Record.

The patient, a piggy attendant, aged 32 years, noticed aching, first in the right leg (which had been weakened by acute anterior poliomyelitis 18 years before) and then in the muscles and joints, and headache, which was becoming increasingly severe. When first examined, 24 hours after the onset of his symptoms, he was lethargic, with a temperature of 101° F.; the left ankle was tender and the tip of the spleen was felt. The blood sedimentation rate (Hawksley) was normal. His condition grew worse, with the temperature rising to 105° F. on the fourth day; he complained of abdominal colic, an aching back and blurring of vision. The skin was dry and the

urine output was diminished; the urine was of normal colour and contained no cells, sugar or albumin. An intravenous glucose-saline infusion was commenced and in 24 hours he was apyrexial and felt well.

At the end of the fifth day the temperature began to rise again, and on the seventh day had reached 104° F. Testicular pain and soreness were noted, and papilloedema of the left optic fundus was apparent. The total white-cell count was 6000 cells per cubic millimetre on this day. The temperature fell rapidly during six hours and he then remained well.

During interrogation it was learned that he had contacted "Diazinon" (an organic phosphorus compound) briefly, and had been present at the birth of several litters of pigs during the three weeks preceding the onset of the illness. There were still-born young amongst the litters, some with unusual appearances. The patient related that, as some of the piglets were not breathing, he tried mouth-to-mouth resuscitation, about which he had read in the daily Press. He was pleased to see that with each inflation the chests expanded and several piglets responded. A veterinary surgeon was asked to examine the still-born animals, and subsequently specimens of serum were sent for analysis.

Blood samples from the patient were sent to the Institute of Clinical Pathology and Medical Research in Sydney to be tested for brucella and leptospira infections. Blood collected on the fourth day gave negative results for all tests, but that collected on the ninth day gave a positive reaction for *Leptospira pomona* at a titre of 1:100, and on the twentieth day the titre had risen to 1:1000. Tests performed on the porcine sera gave positive reactions for *L. pomona* in a titre of 1:10,000 (a figure usual for infected pigs). An estimate of the patient's serum cholinesterase level was normal.

The treatment given included the administration of soluble acetylsalicylic acid (a diagnosis of acute salicylism was considered on the fourth day) and penicillin by intramuscular injection for six days; this was changed to chloramphenicol in oral dosage six hours before the final fall in temperature.

Two months after the illness the patient was found to be quite well and pursuing his usual occupation.

It is considered that the infection was contracted during the episodes of resuscitation.

Comment.

It has been pointed out that there is an infection risk in the administration of mouth-to-mouth resuscitation. When a human life is to be saved the risk is worth taking. Among the Australian population, grave forms of contagious disease are uncommon, and we have satisfactory treatments for less serious ones.

Animal-borne and transmitted diseases may be more serious, as treatments are less effective. The loss of an animal is chiefly economic, and when this may be great, the animal (for example, a stud breeder) would be most likely to be disease-free.

This new method of resuscitation is a real advance in its simplicity and ready application, and it is to be wondered at that it was not developed earlier.

A CASE OF PRIMARY ABDOMINAL PREGNANCY.

By ANTHONY BACCARINI, M.R.C.O.G.,
Sydney.

PRIMARY abdominal pregnancy is very much a rarity, and doubt as to its actual possibility is expressed by some authorities (Novak, 1952). In the majority of the reported cases the pregnancy has been located in close proximity to the uterus or adnexa. The following case of implantation some distance from the uterus would seem

to reinforce the opinion that this type of pregnancy really occurs.

Clinical Record.

The patient was a young woman, aged 24 years, with two children aged seven and a half and six years. She had had no operations, miscarriages or serious illnesses. She was admitted to hospital at 2 a.m. on April 6, 1960, as an emergency. She complained that at 8 p.m. on April 5, she had experienced severe, constant, mid-line lower abdominal pain which soon became generalized. Soon after, aching pain in both shoulders was noted. Both symptoms had persisted. For two weeks prior to admission she had experienced attacks of lower abdominal pain lasting from half to one hour, felt particularly after intercourse. No symptoms of pregnancy had been noted, and there had been no vaginal discharge or bleeding. The last normal period had begun on March 5, 1960; the cycle was usually of 30 days, and the patient considered that she was one or two days overdue.

Physical examination revealed a healthy young woman, looking slightly pale, but not in distress. The pulse rate was 70 per minute, and the blood pressure was 114/70 mm. of mercury. The abdomen displayed slight distension. Generalized tenderness was elicited, particularly in the hypogastrum, with maximum and equal intensity over both tubo-ovarian triangles, and rebound tenderness in these areas. Pressure on the abdomen increased the intensity of the shoulder pain. Bowel sounds were present. Shifting dullness was not detected. Vaginal examination confirmed the absence of external bleeding; the cervix was softened and the external os was closed. The uterus was in anteversion, slightly enlarged and soft. It was freely mobile and not tender, although stretching of the parametrium caused discomfort. High up in the posterior fornix could just be tipped a small, very tender mass, which seemed to recede from the palpating finger.

Hæmoperitoneum of uncertain origin was the indication for laparotomy. Twenty-four ounces of blood were removed from the peritoneal cavity. At first glance no bleeding point was seen; the uterus was anteverted and slightly enlarged. Both Fallopian tubes were quite intact, the left ovary was normal and the right ovary contained a thin-walled, clear cyst the size of a marble. When the greater omentum was pulled up, a plum-coloured mass some 3 cm. in diameter, bleeding from a laceration on its surface, was seen in the centre of the posterior aspect. Small hydatid cysts of Morgagni were attached to either tube on extraordinarily long pedicles some 4 cm. in length. That from the left tube was closely intermingled with the omental fat in close proximity to the mass.

No difficulty was experienced in stripping the ectopic conceptus from the omentum, one or two small vessels being ligatured. The hydatids of Morgagni were removed and the abdomen was closed. The convalescence was uneventful; a normal period occurred on April 8, the patient conceived at the next ovulation and is proceeding with her pregnancy.

Pathology Report.

Specimen consists of a rounded mass of haemorrhagic tissue 3 cm. in diameter; it had been opened to show a central space 1 cm. in diameter with a smooth lining (this had contained a minute embryo). Microscopically the material is seen to consist of blood clot and numerous chorionic villi.

Discussion.

As stated by Studdiford (1942), the requisites for a diagnosis of primary abdominal pregnancy are: (i) normality of both tubes and ovaries with no evidence of recent or remote injury; (ii) absence of a utero-peritoneal fistula; (iii) presence of a pregnancy related exclusively to the peritoneal surface, and young enough to eliminate the possibility of secondary implantation following nidation in the tubes. These criteria are undoubtedly satisfied.

The presence of endometrial implants is not considered necessary for the support of the ovum. If it is not

ensnared by the fimbriae, the blastocyst, at about the seventh day, will embed anywhere it comes into contact. The extraordinarily long pedicles of the hydatids of Morgagni and their intimate association with the ectopic conceptus would suggest that these small tumours had, for some time, been caught up with omentum, and that the ovum had tracked along this path.

References.

STUDDIFORD, W. E. (1942), "Primary Peritoneal Pregnancy", *Amer. J. Obstet. Gynec.*, 44: 487.
 STREPTOE, F. (1950), "A Case of Abdominal Pregnancy", *J. Obstet. Gynec. Brit. Emp.*, 57: 953.
 NOVAK, E. (1952), "Gynecologic and Obstetric Pathology", Third Edition, Saunders, Philadelphia and London.

Reviews.

Radiologic Examination of the Small Intestine. By R. Golden, M.D.; second edition; 1959. Springfield: Charles C. Thomas. Oxford: Blackwell Scientific Publications Limited. 10" x 6½", pp. 576, with many illustrations. Price: £11 8s.

THIS is a revised edition of a former work. As in the case of its predecessor, it is a fine contribution to radiology, and in its present form it is a most comprehensive volume of reference. Its sequence is very good. The author's technique is discussed and compared with that of others, a fair and impartial opinion as to advantages and disadvantages being given.

The sections devoted to embryology, anatomy and physiology are extremely well done, and form a fitting preliminary for the subsequent chapters. The normal is first discussed, and is followed by developmental abnormalities, functional lesions, inflammatory and neoplastic conditions, right through to parasitic infestations.

The section devoted to neoplasm is of great interest, in that primary neoplasm of the small bowel is a comparative rarity; but the author has a great collection of these lesions and classifies them logically and well. The illustrations dealing with these lesions are excellent and are in themselves further proof of the value of time spent in adequate technique.

This is a book of great value to all practitioners in radiology, and for the specialist it is filled with excellent material and reference. In all, it is a work highly to be commended.

Surgical Gastroenterology: Considerations Based on Pathologic Physiology. By Warner F. Bowers, A.B., B.Sc., M.D., M.Sc., Ph.D. (Surg.); 1960. Springfield, Illinois: Charles C. Thomas. Oxford: Blackwell Scientific Publications Ltd. 10" x 6½", pp. 516 with many illustrations. Price: £7 8s. (English).

ALTHOUGH no attempt has been made in this book to encompass all the surgical aspects of gastro-intestinal disease in 498 pages—after all, an impossible task—a general outline is succinctly given. This book is well produced, the instructions are straightforward, and the drawings (by George J. Thomas) are exceptionally clear. The price, however, is rather high. The author is obviously writing from the wide experience of a busy surgeon, but in the rôle of a busy surgeon rather than that of an author he has permitted a sprinkling of typographical errors to pass the proof-reading stage.

While all surgical diseases of the gastro-intestinal tract from the oesophagus to the anus seem to be mentioned, the relative space allotted to some is unexpected. Both diverticulitis and complete rectal prolapse are, on occasions, difficult to treat, the latter being the more difficult to cure permanently. On that basis it is perhaps not surprising to find that diverticulitis is discussed in three pages, whereas seven and a half pages are allowed for the discussion of complete rectal prolapse. However, few would agree with the treatment recommended here for complete rectal prolapse, for it is at variance with most present-day teaching.

Controversial subjects are discussed from both sides, and without any great emotional bias. This is especially noticeable in the consideration of the place of the Billroth I type of gastrectomy.

On the other hand, newer problems in therapy are also included. For instance, in the recent past the treatment of ulcerative colitis with cortisone enjoyed some popularity

in the hands of the physicians, even if not in the hands of the surgeons, and it is good to see that it is unequivocally stated that there is a significant increase in the operative risk if colectomy is preceded by cortisone.

Most books on gastro-enterology have a medical rather than a surgical flavour, whereas the approach to a patient with a gastro-enterological lesion should usually be from both aspects. Accordingly, it is hoped that the plea for closer teamwork will fall on the ears of physicians and surgeons alike. All in all, this is a book of reference to be recommended to the specialists in these two major groups, as well as to the family doctor to whom it is said to be directed.

Diseases of the Nervous System in Infancy, Childhood and Adolescence. By Frank R. Ford, M.D.; fourth edition; 1960. Oxford: Blackwell Scientific Publications Ltd. 10" x 6½", pp. 1564, with illustrations. Price: £11 16s.

THIS book is so well known that no introduction is necessary. This new edition has been extensively altered and brought up to date. The book is now 1548 pages in length, but in the rapidly expanding field of paediatric neurology, even this much space demands a good deal of compression.

The chapter on examination of the nervous system in the child has been omitted in this edition. It is impossible to detail the revisions; however, it is most difficult to find any section of this book which contains out-dated material, and when this is found it is usually due to delays in publication.

The section on metabolic diseases is extensively altered. Recently described conditions, such as Hartnup disease and maple sugar urine disease, are mentioned and references given.

Muscular diseases described in the last decade, such as Shy and Magee's non-progressive myopathy and the new classification of amyotonia congenita, are adequately dealt with.

In the section on infections, subdural effusions complicating meningitis and similar recent concepts find mention.

There is little doubt that this book still holds its place as the best textbook of paediatric neurology. To finish on a sombre note, the local price is £19 10s., a feature which will deter many from owning this useful and comprehensive volume.

Recent Advances in Human Genetics. Edited by L. S. Penrose, M.A., M.D., F.R.S., with the assistance of Helen Lang Brown; 1961. London: J. & A. Churchill Ltd. 8" x 5½", pp. 204, with 13 illustrations. Price: 27s. 6d. (English).

In the preface to this book Professor Penrose states that the past decade has been a violent eruption of exciting new discoveries in human genetics. He has chosen eight topics to illustrate his statement. Recent advances in these eight topics are described by himself and six other authors. The resulting collection of essays justifies the statement in his preface, but also shows what an appallingly difficult subject of research human genetics is. In comparison with other geneticists, the student of human genetics is beset by all kinds of difficulties which add a certain intellectual fascination to his work. The measurement of mutation rate of individual loci has been better studied in man than in most species. Man has the advantage of being rather well documented, so that data on mutation rates accumulate. Nevertheless, Chapter I is an account of pitfalls and inaccuracies as much as anything else, and shows how difficult it is to determine whether a mutagenic agent such as radiation has in fact altered the mutation rate. New cytological techniques, though they have pointed to explanations of human abnormalities, are not readily connected with genetic evidence which could confirm the cytological findings. These depend on the ability to distinguish morphologically between elements which are similar in size and shape and notoriously plastic during preparation. One cannot help doubting the reliability of identifications depending solely on measurements of relative chromosome length. Even the brilliant work on haemoglobin is handicapped in comparison with similar work in other species in which series of multiple alleles can be compared in all combinations in isogenic backgrounds; nor can problems in quantitative genetics be solved by such techniques as selective breeding and the crossing of pure lines. But we are interested in human genetics because, in addition to any explanations which it gives of genetics in general, it concerns ourselves. This book will do for the reader all

it sets out to do. It provides a concise account of current ideas in eight important fields, and will stimulate interest in those fields not covered but referred to.

The reader unfamiliar with *Drosophila* genetics must not be misled by the misprint on page 28. An XXY individual in *Drosophila* is a female which is fertile—not infertile, as stated.

Myocarditis: Pathogenesis, Clinical Aspects and Therapy with Recent Investigations Concerning the Principles of Metabolic Electrocardiography. By Ferdinand Wuhrmann, M.D., with the collaboration of Serge Niggli, M.D., and translated by Harvey Adelson, M.D.; 1960. Springfield, Illinois: Charles C. Thomas. Oxford: Blackwell Scientific Publications Ltd. 9 $\frac{1}{2}$ " x 6 $\frac{1}{2}$ ", pp. 232 with illustrations. Price: 84s. (English).

THIS is the first English translation of a book published in Switzerland in 1956. In 1950 and subsequently, Professor Wuhrmann published papers which he believed supported the thesis that disturbances of myocardial function might be found in association with marked dysproteinæmia of varied aetiology and long duration. This idea was first suggested by a study of heart disease in association with liver disease.

The cardio-vascular symptoms of myocarditis consist of changes of pulse rate, hypotension, dyspnoea, cyanosis, refractory behaviour to digitalis preparations, electrocardiographic changes, increased general fatigue and weakness. The suggestion is that disordered protein metabolism (hypoalbuminaemia, hyperglobulinaemia) leads to alterations in capillary permeability in heart muscle. This is followed by changes in the interstitial fluid and subsequently by fibrosis. In the early oedematous stage these changes are reversible. In all stages they may be accompanied by haemodynamic and electrocardiographic changes. Dyselectrolytemia frequently complicates the picture and at times confuses it. The present work presents evidence derived from a study of a further 40 patients with myocarditis. The main plan of the work entailed synchronous blood chemistry and electrocardiographic studies.

The authors admit that the evidence for their hypothesis is still far from complete, and the present rather long monograph is in our opinion unconvincing. However, to clinicians the book will be useful, in that it does demonstrate the frequent association of protein and electrolyte disorders with cardio-vascular abnormalities.

This book is much too long. The electrocardiographic changes associated with electrolyte disorders are now well established, and need not have been laboriously discussed here. The main thesis tends to be obscured by unnecessary detail and by irrelevancies.

Myocarditis is a difficult and complicated problem, and this monograph is certainly no more than a preliminary bout with a wily adversary. Workers in the field will find it of value, and the references, which are largely to the literature in German, provide a good survey of Continental work on the subject. The book is well produced and the illustrations are excellent.

A Primer of Electrocardiography. By George E. Burch, M.D., F.A.C.P., and Travis Winsor, M.D., F.A.C.P.; fourth edition, 1960. Philadelphia: Lea and Febiger. 9 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ ", pp. 204, with 286 illustrations. Price: 55s.

"**BURCH AND WINSOR**", first published in 1945, needs no introduction to most doctors. Previous editions have been published in four languages other than English, and this is the fourth edition in English—eloquent testimony of the book's appeal.

This book is a primer or introduction to electrocardiography, intended for medical students. It is somewhat dogmatic, which in this subject, where a good deal of empiricism remains, is the only rational approach if the subject is to be kept in proportion in the medical course. Nevertheless, all the basic patterns of normality and abnormality are presented, and students who familiarize themselves with the contents of this book will have a good basic grasp of the subject, and with further practical experience should be able to interpret most tracings intelligently.

The revisions in this edition have not been extensive. Bundle branch block and ventricular hypertrophy have been given more extended treatment, and the influence of quinidine on the electrocardiogram has been presented. The illustrations number 286. They are clear, large and idealized, and quite unsurpassed in the subject. The section on myocardial infarction is excellent—brief, and to the point.

Despite the present emphasis on unipolar leads, the authors have chosen to present bipolar electrocardiography first, and to supplement it with a chapter on precordial leads. There must be many teachers who would have preferred to reverse this order for reasons of clarity. Also most teachers like to talk about the arrhythmias early in an elementary course rather than at the end. But these are purely personal views and should not be taken as a criticism of the book; rather they are offered to show that there are other approaches to electrocardiography, and that this book is an excellent, probably the best, presentation of the traditional sequence from bipolar to unipolar electrocardiography. We can be certain that the fourth edition will enjoy the popularity of its predecessors.

Physics and Electronics in Physical Medicine. By A. Nightingale, M.A., Ph.D., F.Inst.P.; 1959. London: G. Bell & Sons, Ltd. 8 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ ", pp. 306, with illustrations. Price: 30s. net (English).

DR. NIGHTINGALE is a physicist who for many years has lectured on physics to medical and physical therapy students, at both undergraduate and post-graduate levels. In this textbook on medical physics, he has set out to meet the needs of physiotherapy and medical students, and of doctors studying for the diploma of physical medicine. This dual purpose inevitably presents a problem, as it is clear that aspirants for the diploma of physical medicine require a more detailed knowledge of physics than the average physiotherapist.

The book is divided into three parts. Part I is devoted to the fundamentals of physics, including mechanics, hydrostatics, fluid flow, electricity, magnetism and wave motion. Part 2 relates to the application of physics to the methods employed in physical medicine for diagnosis and treatment. Attention is paid here to direct and low-frequency currents, to diathermy (long-wave and short-wave), and to radiation with a survey of its biological effects. Part 3 deals briefly with the cathode ray oscilloscope, electromyography, electronic stimulators, ultrasonic therapy and microwave diathermy. It also contains a short chapter on elementary mathematics.

The book as a whole deals with the theoretical aspects, with emphasis on formulae and mathematics, while the practical aspects of machines and techniques receive scant attention; as the author states, it is not a "clinical text book". The main value of this book is as a textbook of medical physics for doctors interested in physical medicine and for all those concerned in the teaching of physical therapists. Physical therapists interested in the underlying theoretical aspects of medical electricity will find it of value as a reference book.

The book is well produced, and is profusely and clearly illustrated with simple black and white diagrams.

Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"**Multiple-Choice Examinations in Medicine: A Guide for Examiner and Examinee**", by J. P. Hubbard, M.D., and W. V. Clemons, Ph.D.; 1961. Philadelphia: Lea & Febiger; Sydney: Angus & Robertson Ltd. 7 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ ", pp. 186. Price: 41s. 3d.

"**Essentials of Neurology**", by J. N. Walton, M.D., M.R.C.P.; 1961. London: Pitman Medical Publishing Company Ltd. 8 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ ", pp. 422. Price: 47s. 3d.

"**A Short Textbook of Haematology**", by R. B. Thompson; 1961. London: Pitman Medical Publishing Co. Ltd. 8 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ ", pp. 306. Price: 47s. 3d. (English).

"**Alfred Hospital Clinical Reports**", edited by R. S. Lawson; 1960. Melbourne: Alfred Hospital. 10" x 6", pp. 104, with illustrations. Price not stated.

"**New Soviet Surgical Apparatus and Instruments and Their Application**", edited by M. G. Anan'Yev and translated from the Russian by J. B. Elliott; 1961. Oxford, London, New York, Paris: Pergamon Press. 8 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ ", pp. 222 with a few illustrations. Price: 80s. net (English).

"**Arthur E. Hertzler: The Kansas Horse-and-Buggy Doctor**", by Edward H. Hashinger; ninth series of the Logan Clendening Lectures on the History and Philosophy of Medicine; 1961. Lawrence, Kansas: University of Kansas Press. 8 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ ", pp. 38, with illustrations. Price: \$2.00.

The Medical Journal of Australia

SATURDAY, JUNE 17, 1961.

RUBELLA DURING PREGNANCY.

SINCE we last discussed rubella during pregnancy in these columns,¹ the available basic data on the subject have been supplemented by two major contributions. The first is the report of the results of a prospective survey undertaken in Britain by the General Register Office, the Ministry of Health and the Department of Health in Scotland.² This is undoubtedly the most comprehensive and thorough survey reported to date, and is a landmark in the history of epidemiological studies of this kind, illustrating what can be done by enlisting cooperation on a national scale. The survey was carried out with the help of all medical officers of health throughout the country, and enjoyed the great advantage of the full backing of the highly organized health services. As many cases as possible were located of women who developed any virus infection during pregnancy from among those attending as ante-natal patients both at hospital and other clinics, and at general practitioner surgeries. At the same time a large and representative control series was obtained from the same sources, by collecting the same information about all women attending for ante-natal care whose birthdays fell on the thirty-first day of any month. In this way details were collected concerning the outcome of pregnancy in 578 women who contracted rubella during their pregnancy and in 5717 women who had no virus disease during their pregnancy. Details were also collected about four other virus diseases, measles (103), chicken-pox (298), mumps (501) and poliomyelitis (33), as well as about influenza (168) during an epidemic which occurred in Liverpool and Manchester in the winter of 1950-1951; numbers in parentheses refer to the number of patients who developed the infection during pregnancy in each case.

The second important contribution is the survey reported on page 881 of this issue, conducted by D. B. Pitt of Melbourne. As our readers should know from the several appeals made in these columns and in the monthly bulletins of B.M.A. Branches, this survey depended on the voluntary assistance of practitioners all over Australia. In the event the response was very uneven. It was perhaps natural that the majority of cases notified came from Victoria, but it is disappointing that New South Wales contributed fewer cases than any other State except Queensland and Tasmania. In the absence of statistics it is difficult to be dogmatic, but there is no reason to believe

that the infection was any less prevalent in New South Wales than elsewhere during the four years covered by Pitt's report, and it is tempting to link this apparent apathy towards the project in this State with the fact that it is the only State in the Commonwealth, apart from Tasmania, in which rubella is not notifiable. In fact this example seems to us to illustrate well the value of making notifiable diseases about which it is desirable to obtain further information of an epidemiological nature. The medical profession in New South Wales benefits from the information obtained, but in this case has contributed little towards the obtaining of the information. After this digression we should hasten to add that, thanks to the cooperation of a considerable number of practitioners in all States, Pitt succeeded in collecting a very valuable series of 138 cases in which the infection was reported during pregnancy, and in which a report was subsequently obtained on the outcome of the pregnancy and on the health of the child. Of these cases, in 61 infection occurred during the critical first 12 weeks, when nearly all cases of serious rubella defect occur.

As has frequently been pointed out, further progress in our understanding of the epidemiology of rubella embryopathy—a convenient term used to describe congenital malformations occurring as the result of maternal rubella during pregnancy—will depend on the results of prospective surveys such as those just referred to. However, the very nature of such surveys makes it difficult to collect a sufficient number of cases to justify the drawing of firm conclusions. Since it was realized that the retrospective collecting of cases inevitably gave a very exaggerated impression of the frequency of congenital deformities among the offspring of rubella pregnancies, the results of quite a number of prospective surveys have appeared, but the actual number of cases collected in most of these is small. The reason for this is of course that though rubella is a common disease, the number of pregnant women who develop it in any one year is small, and the essence of a prospective survey is that these cases must be located before the result of the pregnancy is known. Attempts are often made to get over this difficulty by lumping together the results of different surveys, but this procedure has seldom been entirely satisfactory, because differences in the details collected and in the manner in which they are presented too often leave one in doubt as to how far the results of different surveys are really comparable. This reason alone makes the British survey, with its 578 cases, an outstanding contribution; Pitt's series of 145 cases available for study is also larger than other previously published prospective series, and is more thoroughly documented than most. It can now be accepted as well established that the risk of congenital malformation occurring as a result of maternal rubella refers mainly to rubella occurring during the first three months of pregnancy; that defects as a result of rubella in the thirteenth to sixteenth week of pregnancy are almost entirely defects of hearing; and that in cases of rubella occurring after the sixteenth week, the risk of congenital defects in the offspring is no greater than among the children of mothers who have had no illness during their pregnancy. Within these limits, however, there is a puzzling lack of agreement among the various series

¹ MED. J. AUST., 1959, 2: 609 (October 24).

² "Rubella and Other Virus Infections During Pregnancy", 1960. Ministry of Health Reports on Public Health and Medical Subjects, No. 101. London, H.M. Stationery Office.

quoted. Are the higher rates of defect in some series due to greater pathogenicity of the virus in some epidemics, as is often suggested? Those series which show the highest rate of defect tend to be those which are at least thoroughly documented. Pitt's series shows a gradation in the percentage of affected infants from the first month to the twelfth week which looks almost too good to be true. In fact the figures are too small to be statistically very significant, but they agree reasonably well with the figures collected by Bradford Hill (a summation of four smaller series). However, they are surprisingly different from the results of the British survey, which showed a roughly similar incidence of defect in each of the first three months. This is partly due to the work of A. D. M. Jackson and L. Fisch, who showed that if the children of rubella pregnancies were examined again when they were old enough to cooperate, a much higher incidence of hearing defect was discovered, especially amongst those whose mothers had rubella in the third and fourth months of pregnancy, than was originally suspected. The incidence of deafness found by Jackson and Fisch among the 57 children examined by them was very much higher than among the children covered by the remainder of the British survey. One is left with the impression that this must have been due at least in part to less thorough screening. In this connexion the final results of Pitt's survey, after reassessment of the children at the age of four years, will be of particular interest. One point which appears to have escaped comment is Swan's figure⁴ of 62 cases of microcephaly out of 111 cases of rubella embryopathy, microcephaly being linked in most cases with some other typical defect. Microcephaly is scarcely mentioned in most subsequent series; it does not figure at all in the British survey, and in Pitt's series it is mentioned once, in association with other defects. We assume that this is because subsequent authors have found head circumference of little value in evaluating rubella embryopathy. Other points on which there is considerable divergence among the available sources include the incidence of spontaneous abortion and stillbirth in rubella pregnancies. In the British series rubella during the first three months of pregnancy was associated with a doubling of the rate of spontaneous abortions and a doubling of the stillbirth rate. The rate of spontaneous abortions in Pitt's series is double that in the rubella cases in the British series, but is stated to be little different from that in a control series investigated by Pitt. This may reflect a difference in the stage in pregnancy at which the patients were first seen rather than any difference between the two countries. It is interesting to note that Pitt records 11 cases in which pregnancy was terminated therapeutically, apparently because of the danger of rubella embryopathy; only six such cases were recorded in the much larger British series, which suggests that termination of pregnancy for this reason has never been widely practised in Britain. In two of the British cases in which pregnancy was terminated therapeutically further details were obtained. In one case rubella infection had occurred in the tenth week, and the pregnancy was terminated in the twenty-seventh week; nothing abnormal was observed in the fetus. In the second case rubella had occurred between

the fifth and seventh weeks, and pregnancy was terminated at the thirteenth week, the decision having been apparently influenced by the fact that the mother already had one child who was blind; no abnormality was observed in the fetus and, on histological examination, the eyes were found to be normal. These two cases vividly underline Pitt's statement that "medical opinion now emphasizes that it is the duty of the doctor to treat the rubella-affected child, and not to terminate its life". It is in fact now perfectly clear that, even in the first few weeks of pregnancy, the majority of children escape any serious damage, and most of the defects which do occur are treatable. Apart from deafness, which is seldom complete, the commonest rubella defect is a heart lesion of one kind or another. This occurred in 7 out of Pitt's 14 cases of rubella embryopathy, and in 14 out of 37 such cases detected at first examination in the British series. Cataract occurred 10 times in the British series, and in 3 of Pitt's cases; mental defect was recorded four times in the British series and only once in Pitt's series; some degree of deafness was eventually found in 34 cases in the British series; the figure for deafness in Pitt's series is not yet complete.

On the obverse side of the picture it is important to recognize that rubella embryopathy accounts for only a very small proportion of all congenital malformations. The parents of defective children will usually try to find some scapegoat for their misfortunes, and their doctor may feel under pressure to suggest an explanation; but in the interests of clinical truth we should be clear in our own minds that no explanation can at present be found for the great majority of congenital defects. It is probable that the most common cause is some genetic factor. The importance of rubella embryopathy will obviously depend on the recent epidemiological history of the community in question, but in any extended series it is unlikely that it accounts for more than 1% or 2% of all major congenital anomalies. This aspect of the problem has been recently discussed by M. Cameron,⁵ with special reference to heart disease. The commonest lesion of rubella embryopathy, apart from deafness, is some form of heart defect, yet Cameron estimates that rubella may be responsible for between 2% and 4% of all congenital heart disease. It is true that, in 1956, D. Stuckey⁶ reported that out of 426 patients with congenital heart disease examined at the Royal Alexandra Hospital for Children in the five years up to December, 1953, 44 had a history suggesting rubella embryopathy. However, there are a number of reasons why this cannot be regarded as an unselected series, and it is likely that the proportion of rubella cases was boosted by the severe rubella epidemics of a decade earlier.

Finally reference should be made to the results of the British survey in regard to the other virus diseases examined. From time to time various authors, both in prospective series and in isolated case reports, have suggested that influenza, mumps and other virus diseases early in pregnancy may on occasion be the cause of congenital defects similar to those due to rubella embryopathy. The British survey gives little support for these suggestions. The incidence of congenital defect after

⁴ *J. Obstet. Gynaec. Brit. Emp.*, 1949, 56: 341 (June).

⁵ *Brit. med. J.*, 1: 691 (March 11).

⁶ *Brit. Heart J.*, 1956, 18: 519 (Number 4).

mumps, chicken-pox and influenza (A prime) was no different, either in numbers or distribution, from the findings in the control series. Only measles and poliomyelitis appeared to have any effect. In the case of measles there was a slightly higher incidence of malformations and a higher infant death rate than in the control series, but the evidence as to whether this can be attributed to maternal morbilli is inconclusive. In the poliomyelitis series there were six patients who contracted the disease between the ninth and twelfth weeks of pregnancy. One of these patients aborted; two were delivered prematurely of stillborn children; one child died soon after birth with hydrocephalus and spina bifida; the other two patients produced healthy children. This disastrous sequence of results is too small to prove anything, but it may have been in part due to the severity of the maternal illness rather than to the direct effect of the virus on the fetus. In summary it may be said that while there is no evidence to implicate any other virus disease to an extent comparable with rubella, it is not unlikely that a number of virus diseases, if contracted early in pregnancy, may on rare occasions result in damage to the fetus. However, the risk is so small as to be statistically insignificant. In other words, if a mother contracts one of these other virus diseases early in pregnancy the risk of congenital malformation in the offspring is no greater than in any uncomplicated pregnancy.

Current Comment.

URETERO-SIGMOID ANASTOMOSIS.

THE problem of how to divert the urinary stream when it is necessary to dispense with the bladder is one which has challenged the imagination of surgeons for over a century, and many ingenious solutions have been put forward. Several of these have found favour for a time, but the continuing output of proposals for new modifications of the several different possible arrangements is the best evidence that none of the techniques yet devised is entirely satisfactory. An important recent contribution to this debate is a paper by R. M. Nesbit,¹ read before the American Urological Association at their annual meeting last year. This is entitled "Another Hopeful Look at Ureterosigmoid Anastomosis". This operation was at one stage widely accepted and used with a considerable degree of success. However, in recent years it has fallen into disfavour in many centres, and has tended to be replaced by the use of an isolated ileal loop. In discussing ureterosigmoid anastomosis Nesbit comments that the knowledge that certain lower animals live normally with cloacal arrangements has led investigators to hope that man, too, might be able to adjust himself to a cloacal existence. He traces the history of the operation, from the days of Robert Coffey who introduced the principle of the submucosal tunnel, and indicates the many technical difficulties encountered. The chief bugbears of the operation are pyelonephritis and electrolyte imbalance. The former may be due either to stenosis at the uretero-colonic junction or to laxity, allowing reflux of bowel contents. The advent of antibiotics encouraged urologists to perform transplant operations in increasing numbers, and the survival rates were such that sizeable series of cases came to be observed and reported. Nesbit states that, as before, the late results in many cases were marred by recurrent pyelonephritis or blood chemistry imbalance, causing hyperchloraemic acidosis. Another hazard has

been hypototassemia, but the exact cause of this is not properly understood.

Nesbit states that if uretero-colic anastomosis is to be abandoned because of these considerations, then the surgeon must use either cutaneous ureterostomy or the ileal conduit as an alternative acceptable method of supravesical diversion of urine. Cutaneous ureterostomy avoids all risk of urine reabsorption, but present techniques do not avoid risks of obstruction or infection, as well as the social and personal discomfort of collection of urine on the surface. As already noted, the ileal conduit is at present enjoying a wave of acceptance; it provides a single stoma on the skin, and there is less tendency to obstruction of the ileal stoma. However, drawbacks include ascending infection of the kidneys, and it now seems that no form of supravesical urinary diversion is devoid of serious hazards. If renal infection and chemical imbalance could be avoided, uretero-colonic anastomosis would be the ideal solution, and there have been quite a number of patients who have lived for many years in good health, having adapted themselves to the cloacal existence. Nesbit cites a number of such cases, and points out that one attribute is common to all those who remain clinically well for years—pyelograms are normal, and no symptoms of pyelonephritis are present. He states that patients who exhibit these attributes are those in whom the tunnel-valve principle was obeyed in performing the anastomosis. One of the best techniques of recent years is that of Willard Goodwin, who makes his implantation oblique, so as to secure the valve-action of a submucosal tunnel, but makes it firm within the colon by an open transcolonic approach. A mucosa-to-mucosa junction is made, and the oblique opening in the ureter is quite a long one; there is therefore no risk of stenosis, and, at the same time, the tunnel-valve should prevent reflux.

Nesbit has now devised a technique which embodies both the old submucosal tunnel technique of Coffey and the intraluminal nipple principle of Mathisen; this has been used so far in four adults who underwent cystectomy for bladder carcinoma. The anastomosis is performed by an open transcolonic approach, the nipple being fashioned from a flap of the bowel wall. These four patients have normal pyelograms at points up to one year after the operation, and, with one exception, blood chemistry values are normal. Nesbit makes no claim on the basis of such a small series for so short a time, but he believes that the technique embodies two principles which appear sound, and suggests further modifications of the technique which he proposes should be investigated in the experimental laboratory, and be made the subject of long-term study. Any operation for supravesical urinary diversion creates an arrangement that is at best a poor substitute for the functioning human bladder. While many patients can accommodate themselves to cutaneous urinary drainage if survival depends on it, others will find the cloacal arrangement a much more acceptable compromise, even if this involves an increased risk of morbidity. Nesbit therefore urges that continued efforts should be made at the improvement of techniques in the hope that some day the goal may be achieved whose attainment has been a frustrating challenge for so long. The reasons why success is obtained in some patients but not in others are not clear, and he prophesies that the factors which determine success or failure will eventually be found if we continue to search patiently for them.

INDEX TO THE MEDICAL JOURNAL OF AUSTRALIA.

THE index to THE MEDICAL JOURNAL OF AUSTRALIA for volume 2, 1960, is now available. A copy of the index is sent to all libraries, medical societies, etc., receiving the Journal, to publications having exchange arrangements with the Journal, and to readers who have previously asked to be put on the mailing list. Others wishing to receive a copy should write to the Manager, The Printing House, Seamer Street, Glebe, N.S.W.

¹ J. Urol. (Baltimore), 1960, 84: 691 (December).

Abstracts from Medical Literature.

PATHOLOGY.

X-Ray Surveys for Lung Cancer.

H. HORN (*Cancer*, November-December, 1960) discusses data on 965 cases of primary bronchial carcinoma registered at the Norwegian Cancer Registry in the period January 1, 1952, to July 1, 1956. About 10% of cases were detected by mass chest X-ray surveys. Resection was performed twice as frequently in the survey-detected cases as it was amongst the other cases. There was no difference in the five-year survival rates, which were 37% in each group of resection cases. About 64% of the 965 patients had had previous chest X-ray survey examinations and, on review, changes were seen in the previous films in 81 instances, in the region in which the tumour eventually manifested itself. These changes had been overlooked or misinterpreted in the original readings or follow-up examinations.

"Stiff-Man" Syndrome.

R. SIEGLER (*Arch. Path.*, October, 1960) reports a case of "stiff-man" syndrome with an unusual presenting symptom. The patient complained of weight loss, difficulty in swallowing, and tumour-like masses over the face and neck. Because of the radiological appearances, the clinical diagnosis was carcinoma of the oesophagus, and the emaciation which led to his death was thought to be consistent with this. At autopsy the oesophagus was not narrowed but there was some thickening of the muscular layer in the upper third. Histologically, there was necrosis of skeletal muscle in various parts of the body. Where the necrosis was particularly prominent, tumour-like nodules appeared. The smooth muscle of the oesophagus was not involved in this process and the radiological appearances are therefore thought to have been due to spasm. The relationship between this skeletal condition and the myoglobinurias is discussed.

Sensitization of Human Cells to Irradiation.

B. DJORDJEVIC AND W. SZYBALSKI (*J. exp. Med.*, September, 1960) cultured a certain human cell strain in the presence of 5-bromodeoxyuridine (BUDR). The cells could be cultivated indefinitely in medium containing this substance during which time the BUDR replaced up to 45% of the thymidine in the DNA molecule. This rendered the cells highly susceptible to ultra-violet light and also to X rays. This study is part of a project dealing primarily with the genetics of human cells. However, there is quite a possibility that this new mechanism of radiosensitization may have practical application in the therapy of neoplastic diseases.

Amyloidosis of Bone Marrow.

R. B. CONN AND R. D. SUNDBERG (*Amer. J. Path.*, January, 1961) have discovered amyloid in bone marrow aspirates from three patients with primary

amyloidosis. This caused them to review marrow biopsy specimens from patients with known or suspected amyloidosis. In two cases, amyloid material had not been recognized. They also found amyloid in the marrow in eight out of nine cases of amyloidosis coming to autopsy. In seven the deposits were limited to vessels, but in one there was extensive replacement of marrow. A consistent observation was a slight to moderate plasmacytosis of the marrow in both primary and secondary forms of the disorder.

Pituitary Irradiation for Breast Cancer.

W. P. GREENING *et alii* (*Brit. J. Cancer*, December, 1960) have carried out interstitial irradiation of the pituitary using either radioactive gold or radioactive yttrium in 100 cases of breast cancer. The remission rate was 12%, the mortality 11%, and the complication rate was 24%. The patients treated were those for whom no other method of treatment was available. The operation itself is technically simple and in the majority of cases no more of an ordeal than ovariectomy. The authors think this form of treatment is well worth while despite the complication of rhinorrhoea.

Non-Tropical Sprue.

C. T. ASHWORTH *et alii* (*Arch. Path.*, January, 1961) have used the electron microscope to examine jejunal biopsy specimens in two cases of non-tropical sprue. They found that the villi were blunted and atrophic as compared with the normal, and that the microvilli were reduced in size and number as well as presenting several other cytoplasmic alterations. In one case a further jejunal biopsy was examined during complete clinical remission. There was no improvement in the abnormalities which had been noted during the relapse. The reason for this is unknown.

Pseudomembranous Enterocolitis.

S. J. ABRAMS AND T. WEINBERG (*J. Mt. Sinai Hosp.*, number 2, 1960) have reviewed the subject of pseudomembranous enterocolitis from various aspects. They discuss the various theories of causation, and describe the pathology, modes of clinical presentation, and course of the disorder. This study is based on nine cases in which autopsy was performed at the Mount Sinai Hospital. The authors could find no correlation with antibiotic treatment, nor could they incriminate the staphylococcus. They present a concise account of the present status of this mysterious disorder.

Acquired Toxoplasmosis.

G. N. BUDZILOVIC (*Amer. J. Clin. Path.*, January, 1961) describes the complete autopsy study of a man aged 82 years with acquired toxoplasmosis which was manifested by gross lymphadenopathy, transient macular eruption, eosinophilia, atypical lymphocytosis and terminal encephalitis. The role of the upper alimentary canal as a possible portal of entry of the organisms is suggested on the basis of the clinical observation of loss of taste, which was one of the first symptoms of the illness,

and the post-mortem demonstration of a diffuse subacute granulomatous stomatitis. A detailed description of the various stages of the generalized toxoplasmosis granulomatous lymphadenitis is included and some specific features are emphasized in the distinction of this condition from other types of granulomatous lymphadenitis or malignant disorders of the reticulo-endothelial system. Identification of the FAS-positive structures observed in the heart muscle of this patient as non-viable encysted forms of *Toxoplasma gondii* is attempted, and this is based solely on the striking morphological similarity between the former and the identified viable cysts. The ultimate fate of the encysted forms of the organism is discussed, in view of the latter finding. A benign thymoma of the anterior mediastinum is described as an unrelated finding.

Congenital Adrenal Hypoplasia.

N. KERENYI (*Arch. Path.*, March, 1961) has reported a case of adrenal hypoplasia associated with diffuse lesions of the central nervous system. The adrenal glands were small and, architecturally, were miniatures of the normal. There was no posterior lobe of the pituitary gland. This is the type of adrenal hypoplasia usually associated with anencephaly. In this case there was no malformation of the brain, though there were diffuse lesions suggestive of toxoplasmosis in histological preparations. Unfortunately no laboratory confirmation of this was possible. There is another type of adrenal hypoplasia, the cytomegalic type, which is unassociated with central nervous system malformations. The author suggests that this should be named primary or cytomegalic type of adrenal hypoplasia and that the other should be termed secondary or anencephalic type. The author hints that toxoplasmosis may be an aetiological factor in the secondary type.

Experimental Malformations.

H. KALTER AND J. WARKANY (*Amer. J. Path.*, January, 1961) have produced malformations in animals by excessive dosage of vitamin A. This is not a new method, but many of the malformations they obtained simulated congenital malformations known to occur in humans. These were supernumerary upper and lower incisors, ankyloglossia, lateral, cervical thymus, coronary aneurysm, crossed ectopic kidney, recto-vesical fistula and absent umbilical artery.

Metaplasias and So-Called Carcinoma-in-Situ of the Uterine Cervix.

J. DE BRUX AND J. DUPRÉ-FROMENT (*Presse méd.*, October 26, 1960) have made a study of the histogenesis and prognosis of dysplasias of the uterine cervix and of so-called intraepithelial carcinoma. As a result of their work, they believe that the lesion known as carcinoma-in-situ is really an undifferentiated, immature, hyperactive metaplasia. In their opinion the lesions known as suspicious or irregular metaplasias are simply attempts at late differentiation and disordered maturation. These lesions, they hold, are not malignant and have no malignant potential. They

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simply indicate the embryonic nature of the mesenchyme of the genital tract, which is very sensitive to hormonal stimuli. The occurrence of cervical lesions in pregnancy, which are identical with those of the non-pregnant woman, makes it possible to follow their progress and their cure; this proves that they are benign. The authors consider that true intraepithelial carcinoma, if it really exists, has such histological and cytological characteristics and progresses in such a way that it is difficult to distinguish it from invasive carcinomas.

Nodular Fasciitis.

E. B. PRICE *et alii* (*Amer. J. Clin. Path.*, February, 1961) describe the pathology of a condition which is frequently thought to be a sarcoma. It occurs as a nodule, usually about 2 cm. in diameter, situated in the subcutaneous tissue. The commonest site is in the upper extremity or the trunk. These lesions are composed of proliferating fibroblasts of the superficial or deep fascia. The proliferating cells tend to be larger than normal, have numerous mitoses, and tend also to infiltrate the subcutaneous fat. There is no capsule and the nodule frequently has a myxoid appearance. The authors stress the pathological criteria by which one can distinguish this lesion from a truly malignant one. Amongst the names given to this lesion in the literature are nodular fibrosis, subcutaneous fibromatosis and nodular fasciitis.

Islets of Langerhans.

J. C. EHRLICH AND J. M. RATNER (*Amer. J. Path.*, January, 1961) have studied pancreatic islet tissue in order to discover the nature of the hyaline material which is often seen in diabetics. They found hyalinization of the islets of Langerhans in 45 of 91 consecutive necropsies in diabetic subjects over 50 years of age and in only 7 of 178 consecutive necropsies in subjects over 60 years of age not known to be diabetic. Histochemical studies have led the authors to the conclusion that the hyalinizing substance is amyloid. This is a localized deposit occurring in 50% of diabetics aged more than 50 years, the kidneys and vessels being quite devoid of this material.

RADIOLOGY.

Renal Osteonephropathy.

S. CRONQVIST (*Acta radiol. (Stockh.)*, January, 1961) describes three types of skeletal changes characteristic of renal osteonephropathy. In one the lesions resemble those seen in rickets, and in another they resemble those of osteitis fibrosa cystica generalisata. The former type occurs before, the latter type mainly after, closure of the epiphyseal line. Occasionally both types may be found in the same patient. Before closure of the epiphyseal line the lesions are limited mainly to the distal part of the long bones, where the metaphyses are increased in width, cupped, and of irregular outline. In more advanced cases there is general

rarefaction, obliteration of all compact tissue and coarsening of the trabecula in the cancellous bone. These changes may also occur in the skull, with granular rarefaction and splitting of the lamina interna and externa, sometimes with thickening of the bone. Deformation of the lower limbs may also occur. A generalized or granular decalcification with or without disarrangement of the trabeculae may also be seen in adults. Subperiosteal erosion is common and readily recognized. This change is most commonly located in the middle phalanges of the fingers, but also occurs in the medial part of the upper third of the tibia, in the corresponding parts of the humerus and femur, in the acromion, the lateral end of the clavicle and the distal part of the ulna. Resorption of the lamina dura of the teeth has also been described. In advanced cases the X-ray appearance may be dominated by osteosclerosis. The sclerosis may involve the major part of the skeleton but is most frequently localized to the spine. Metastatic calcifications may also be seen. Three types have been distinguished, physiological, vascular and pathological. As a rule metastatic calcifications occur in the patients with advanced osseous changes, but they may be the first radiological sign of renal osteodystrophy. In the differential diagnosis primary hyperparathyroidism offers the greatest difficulties. In this condition the serum calcium level is raised and the serum phosphate level depressed, while in renal osteonephropathy the converse changes are stated to be most common, though by no means the rule.

Adenomyomatosis of the Gall-Bladder.

J. COLQUHOUN (*Brit. J. Radiol.*, February, 1961) describes three types of adenomyomatosis of the gall-bladder which have characteristic radiological features. These are: (i) A generalized type, in which a more or less complete ring of "diverticula" is seen surrounding the main gall-bladder shadow. (ii) A segmental type, in which the lesion is usually seen as a stricture, with involvement of the wall of the gall-bladder in the distal loculus as well. The stricture may also exist alone, or there may be no stricture, the distal part of the gall-bladder wall being uniformly thickened and the lumen therefore narrowed, as seen in the cholecystogram. Less commonly there are multiple strictures. The stricture may be quite long and the lumen so narrow that it is remarkable that any contrast medium can pass beyond it. In such cases the Rokitansky-Aschoff sinuses may be most numerous around the stricture. Often the gall-bladder is kinked at the site of the stricture, but, unlike kinking due to posture, the kink is virtually constant in all positions. Stones are often demonstrable in the distal loculus. (iii) A fundal type, in which there is a tumour-like thickening or nodule at the fundus, sometimes partly extruded and sometimes invaginated. Because of their tumour-like characteristics these lesions have often been regarded as adenoma, adenomyoma or cystadenoma. If the lumen of the affected part is so grossly narrowed that it is virtually occluded, the gall-bladder outline in the cholecystogram may appear quite normal.

A lesion encircling the fundus may cause narrowing of the lumen, which can simulate a true diverticulum of the gall-bladder. The fundal nodule may become invaginated and cause a filling defect. When sinuses within the fundal nodule are visualized they may produce a rosette appearance. Visualization of the dilated Rokitansky-Aschoff sinuses is not essential for the diagnosis of adenomyomatosis. Any gall-bladder exhibiting strictures, septa, kinks, angular deformities or irregularities of outline should be suspect. Careful technique and close scrutiny of films are required if minor degrees of the condition are to be recognized.

Free Gas in the Fœtus as a Sign of Intrauterine Death.

A. M. STEWART (*Brit. J. Radiol.*, March, 1961) states that the early signs of fetal death are: (i) slight flexion of the fetal spine, (ii) the halo sign of Deuel, (iii) the presence of intrafetal gas. Of these the only unequivocal one is the presence of intrafetal gas. The gas is small in amount and is almost always confined to the fetal vascular system; it is most frequently observed in the heart and portal veins. However, it has been seen outside the circulation, in the retroperitoneal tissues, scalp, peritoneal and pleural cavities. In the author's series of 31 cases the shortest interval after cessation of the fetal heart at which gas was demonstrated *in utero* was 12 hours, and in six instances it was observed in 24 hours or less. In 21 cases it was present at seven days or less, and in 26 cases within ten days. It was the only sign of death in 15 cases. The "halo" sign, disalignment of the sutures and Spalding's sign were not observed earlier than four days. The gas, once formed, was found to be slowly reabsorbed in three cases. Radiographs of the highest quality are essential and careful scrutiny of the film is required to avoid missing small amounts of gas. The author describes the appearance of gas in the various parts of the vascular tree. He states that care must be exercised in distinguishing the transluencies from maternal gas and from the fat-outline of the fetus in the last weeks of pregnancy.

"Buscopan" and Oesophageal Achalasia.

J. T. WRIGHT (*Brit. J. Radiol.*, February, 1961) discusses the effects of "Buscopan" on achalasia and states that his observations indicate that this drug causes the gullet to empty by temporarily relaxing the narrowed portion of the gullet and that its effect is mainly in this portion. The fact that "Buscopan", a ganglion-blocking drug, does this is contrary to the idea that the primary abnormality is an aganglionic segment in the region of the cardia. The author states that his observations and those of other workers suggest that this disorder is not an abnormality at the cardia with secondary changes in the proximal portion, but is rather a complex neuro-muscular disorder of the gullet as a whole. He suggests that the only normal portion of the gullet may be the narrowed portion which fails to relieve its stimulus for relaxation, namely a normal peristaltic wave passing down the gullet.

On The Periphery.

CANINE CATARACT.

In September, 1960, Miss R. Boulton brought in her little dog, "Prince Paddy", Grand Champion Yorkshire Terrier, on the advice of a mutual friend. Paddy was blind, from bilateral cataract. He was eight years old, equivalent to 55 years in human age. That meant that he had senile cataracts.

In a human patient of 55, it would not be practicable to perform a needling (discission) operation, because, although incision of the anterior capsule of the lens would open the door for an inflow of aqueous humour, the visual result would be inadequate. Aqueous fluid dissolves the soft fibres of a lens; it cannot dissolve a hard central nucleus. So, in a human patient 55 years old, the cataractous lens would have to be extracted. This, of course, would involve corneal incision and the subsequent application of a covering pad over both eyes, to keep the treated eye protected and still, until the corneal wound had healed.



However, this operative procedure would be impracticable in the case of a canine patient, for the dog would only scratch off the dressings and burst open the corneal wound. Even if a fool-proof eye-dressing was to be devised and applied, the little animal, not being able to be instructed verbally, would go berserk with fear, locked in the dark.

In addition to the surgical problem of an indissoluble hard central lens nucleus, there was the medical problem of the risk of administering an anaesthetic to an animal of very small bulk. There was also the ethical problem of whether or not a legally qualified medical practitioner would be legally qualified to infringe upon the field of the veterinary surgeon. However, as Miss Boulton had taken her dog to three veterinary surgeons, all of whom had said that they thought the condition hopeless, and that even if it was not, cataract surgery was not in their province, and as I remembered that a Sydney gynaecological surgeon had operated upon a lioness in Taronga Zoo, I felt that I should not be committing a crime by doing what I could for Paddy.

At first my own answer to Miss Boulton was in the negative; but she took Paddy to yet another veterinary surgeon, Mr. T. Gordon, of Bondi, who told her that he thought that, despite a valvular cardiac lesion, a needling operation would be worth trying, and that he felt confident he could safely anaesthetize Paddy. This he surely did, with an expertly gauged injection of "Pentothal Sodium".

So the decision was discussion. In the end, all went well; but to obviate any impression that this is a pean of praise for myself, here are two mistakes I made. First, I was frightened to instil atropine before operation, for some small animals, especially cats, can become maniacal or die if given atropine, even topically. Secondly, I completely forgot about the existence, in dogs, of a nictitating membrane, the so-called third eyelid, represented in the human eye by the plica semilunaris, which they can sweep from below upwards, like a kind of transparent screen, to protect their cornea from dust and glare, while keeping open their ordinary upper and lower lids. I was cognizant of the presence of this membrane in birds, especially in the predatory, down-sweeping, hawks and eagles.

But I forgot about dogs. This dog has very large pupils, almost the size of a sixpence, which made me think that a discission operation would be technically easy. In this I was mistaken, for as soon as Mr. Gordon had anaesthetized the dog, the pupils contracted to almost pin-point size, and the nictitating membrane slid up over the pupillary area of the eye which I had decided to operate upon, the left eye.

So, I was left between the devil and the deep blue sea, between the rocks of Scylla and Charybdis. Either I had to abandon the operation for the time and subject the dog to the perils of another anaesthetic, or give Mr. Gordon a broad fixation forceps to pull down the light-brown nictitating membrane for me, so that I could try to pass a Moorfields needle through the small pupil. This we both managed to do. I then, too late, instilled atropine ointment.

There was little vascular reaction, but it took some time for atropine to restore the pupil to normal size. The dog was examined once a week, and atropine ointment was instilled weekly.

The operation was performed in October, 1960, and Miss Boulton reported that some measure of sight seemed to be coming back, as the dog no longer bumped into objects on his left side.

In February, 1961, I decided to reoperate, as the dog had suffered no ill effects from the first operation and anaesthetic, despite his cardiac lesion. I wanted to see what had been accomplished by the operation in October, 1960. This time, the mistakes were not repeated; the pupil was widely dilated by atropine, and the nictitating membrane was held down.

When the Moorfields needle was introduced through the cornea and into the lens, it was seen that all the soft protein lens matter had been dissolved by the aqueous humour, the central lens plaque alone remaining. When the point of the needle was applied to the centre of the lens, the plaque immediately dipped down towards the vitreous, so I hastily removed the blade.

Now Paddy chases other dogs, and cats. The facts are of some interest in relation to certain cases of human cataract posing a similar problem. In humans, the Ultima Thule of age for a discission operation would be 35 years.

ARTHUR D'OMBRAY, F.R.A.C.S.

British Medical Association.

NEW SOUTH WALES BRANCH: ANNUAL MEETING.

THE annual meeting of the New South Wales Branch of the British Medical Association was held at the Robert H. Todd Assembly Hall, British Medical Association House, 135 Macquarie Street, Sydney, on March 23, 1961, DR. B. A. COOK, the President, in the chair.

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ANNUAL REPORT OF THE COUNCIL.

The annual report of the Council was taken as read and received on the motion of Dr. T. Y. Nelson, seconded by Dr. E. S. Stuckey. The motion was supported by Dr. A. C. Thomas, Sir Benjamin Edye, Sir Ronald Grieve, Dr. G. L. Howe and Dr. David Brown. The report is as follows.

The Council presents the following report on the work of the Branch for the year ended December 31, 1960.

Membership.

The membership of the Branch at December 31, 1960, was 4,432, as against 4,310 at December 31, 1959. The additions included 177 elections, re-elections and resumptions, and 136 removals into the area of the Branch; while the losses have included 37 by resignation, 97 removals out of the area of the Branch, 23 by non-payment of subscription and 34 by death.

The losses by death were as follows: Dr. A. R. Bradshaw, Dr. G. H. Pfeiffer, Dr. F. G. A. Cerexhe, Dr. C. W. Ross, Dr. M. D. H. Harpur, Professor W. K. Inglis, Dr. R. C. Miller, Dr. H. B. Little, Dr. H. T. Gage, Dr. I. C. Thomas, Dr. K. F. Potts, Dr. J. P. Van Leent, Dr. R. R. Lloyd-Jones, Dr. A. R. K. Burne, Dr. R. A. Robertson, Dr. P. L. Mollenhauer, Dr. A. J. Shappere, Dr. J. T. Paton, Dr. C. H. Shearman, Dr. C. E. Corlette, Dr. W. G. Darragh, Dr. H. V. P. Conrill, D.S.O., Dr. N. H. Bridge, Dr. M. Andrew, Dr. P. H. Hume, Dr. R. S. Scott, Dr. M. Brenner, Dr. J. M. Yeates, Dr. N. E. Goldsworthy, Dr. D. C. Henry, Dr. A. E. Lorger, Dr. F. W. A. Ponsford, Dr. B. Fisher, Dr. E. Grun.

Obituary.

William Keith Inglis.

Professor William Keith Inglis was a member of Council from March, 1932 to March, 1943 and was President of the Branch in 1940.

He was Professor of Pathology at the University of Sydney from 1936 to 1952.

By his death the profession suffered a great loss.

The deep sympathy of the Branch is extended to his family.

Meetings.

Ten ordinary general meetings of the Branch (including the annual general meeting), three extraordinary meetings of the Branch and ten clinical meetings were held. The average attendance was 87.

Nine ordinary general meetings were held in conjunction with meetings of the Special Groups, viz.: April 28, with the Section of Obstetrics and Gynaecology, the Section of Urology and the Orthopaedic Group (British Medical Association); May 26, The Otolaryngological Society of Australia, New South Wales Section, and the Section of Surgery; June 30, with the Section of Allergy and the Section of Neurology, Psychiatry and Neurosurgery; July 28, with the Section of Anaesthesia, the Section of Surgery and the Section of Pediatrics; August 18, with the Section of Neurology, Psychiatry and Neurosurgery, and the Section of Medicine; September 29, with the Section of Pediatrics and the Section of Obstetrics and Gynaecology; October 29, with the Section of Medicine and the Section of Anaesthesia; November 24, with the Section of Radiology and the Section of Medicine; December 8, with the Section of Pathology, the Section of Radiology and the Orthopaedic Group (British Medical Association). Twenty-two papers were presented at these meetings.

The ordinary general meeting on Saturday, October 29, was held in the Florey Lecture Theatre, The John Curtin School of Medical Research, Canberra, Australian Capital Territory, it being the ninth meeting of the Branch to be held outside the Sydney metropolitan area. There were 34 members present and two papers were read. Social functions during the week-end were arranged by the Central Southern Medical Association. The Council extends its grateful thanks to the Central Southern Medical Association for its assistance in the organization of the meeting.

Two extraordinary general meetings of the Branch were held on the evening of Wednesday, July 27, 1960, one at 8 p.m. on the requisition of 20 members of the Illawarra Suburbs Medical Association, and the other at 9 p.m. on the requisition of 22 members of the Branch. The business of both meetings was primarily consideration of the organization of the profession. Further reference to the two meetings is made later in this report. At a third extraordinary general meeting held on July 7, addresses were given on "Life Assurance" and "Superannuation", the

emphasis being on the relation of these matters to medical practitioners.

The clinical meetings were held at the Psychiatric Clinic, Broughton Hall, Rachel Forster Hospital for Women and Children, Royal North Shore Hospital of Sydney, Royal Prince Alfred Hospital, Royal Alexandra Hospital for Children, Saint Vincent's Hospital, Lewisham Hospital, Sydney Hospital, Royal Hospital for Women, and The Saint George Hospital.

An invitation was extended to the fifth and six year medical students of the University of Sydney to attend ordinary general meetings and to sixth year medical students to attend clinical meetings of the Branch.

Representatives.

The Branch was represented as follows:

1. Council of the British Medical Association: Professor Sir Brian Windeyer.
2. New South Wales State Cancer Council: Sir Benjamin Edye, C.B.E.
3. Department of Social Services Standing Departmental Rehabilitation Committee: Dr. M. Naomi Wing.
4. Post-Graduate Committee in Medicine, The University of Sydney: Dr. E. F. Thomson, Dr. K. S. Jones, Dr. S. R. Dawes.
5. Board of Optometrical Registration: Dr. J. Davis.
6. Fluoridation of Public Water Supplies Advisory Committee: Dr. D. G. Hamilton.
7. Annual Representative Meeting, Torquay, June, 1960: Dr. W. A. Conolly, Dr. T. S. Douglas, Dr. J. H. Thorp.
8. The Ophthalmic Association Ltd.: Dr. E. V. Waddy Pockley.
9. New South Wales Institute of Dietitians: Dr. F. H. Read.
10. New South Wales Bush Nursing Association: Dr. L. W. Wing.
11. Florence Nightingale Memorial Committee of Australia: Dr. Mary Puckey.
12. Old People's Welfare Council of New South Wales: Dr. G. L. Howe.
13. New South Wales Institute of Hospital Almoners: Dr. R. A. R. Green.
14. New South Wales Association for Mental Health: Dr. E. T. Hilliard.
15. Royal Flying Doctor Service of Australia, New South Wales Section: Dr. George Bell, O.B.E.
16. New South Wales College of Nursing: Dr. E. F. Thomson.
17. Hospitals Contribution Fund of New South Wales: Dr. Hugh Hunter.
18. City of Sydney Youth Welfare Advisory Committee: Dr. G. L. Howe.
19. Rehabilitation Coordinating Council of New South Wales: Dr. J. G. Hunter, C.M.G.
20. Committee for the Placement of Resident Medical Officers: Dr. T. Y. Nelson.
21. Federal Council of the British Medical Association in Australia: Dr. A. J. Murray, O.B.E., Dr. W. F. Simmons, Dr. E. F. Thomson, Dr. R. H. Macdonald, O.B.E.
22. Medical Officers' Relief Fund (Federal), Local Committee of Management for New South Wales: Dr. A. M. McIntosh, Dr. A. J. Murray, O.B.E., Dr. R. H. Macdonald, O.B.E.
23. Medical Finance Limited, Board of Directors: Dr. E. A. Tivey, Dr. A. C. Thomas, Dr. T. Y. Nelson.
24. Australasian Medical Publishing Co. Ltd.: Dr. W. F. Simmons, Dr. W. L. Calow, Professor L. F. Dods, M.V.O.
25. New South Wales Medical Board: Dr. J. R. Ryan.
26. Federal Medical War Relief Fund, Local Committee of Management: Dr. R. H. Macdonald, O.B.E., Dr. A. C. Thomas, Dr. A. J. Murray, O.B.E.
27. National Association for the Prevention of Tuberculosis in Australia (New South Wales Division): Dr. W. Cotter B. Harvey.
28. Medico-Pharmaceutical Liaison Committee: Dr. D. G. Hamilton, Dr. G. L. Howe, Dr. Mary C. Puckey, Dr. W. F. Simmons.
29. Department of Public Health, Poisons Advisory Committee: Sir William Morrow, D.S.O.
30. Department of Motor Transport (Committee to consider the question of adoption of chemical tests of body fluids to determine whether a driver is under the influence of alcohol): Dr. F. S. Hansman.
31. National Health Service: Pensioner Medical Service Committee of Inquiry: Dr. A. C. Thomas, Dr. M. S.

Alexander, O.B.E., Dr. B. A. Cook, Sir William Morrow, D.S.O., Dr. G. L. Howe.

32. New South Wales Association of Medical Records Librarians Advisory Committee: Dr. T. Y. Nelson.

33. State Medical Planning Committee: Dr. M. S. Alexander, O.B.E.

34. Medical Appointments Advisory Committee: Dr. T. Y. Nelson.

35. New South Wales Examining Council in Medical Technology (Hospitals Commission of New South Wales): Dr. A. K. Sewell, Dr. A. E. Gatenby.

36. St. John Ambulance Association: Dr. B. A. Cook.

37. Special Departmental Committee for Investigation of Maternal Deaths: Dr. E. A. Tivey; Alternate Representative: Dr. M. H. Elliot-Smith.

38. Coordinating Council of the Physically Handicapped: Dr. R. A. R. Green.

39. Road Safety Council of New South Wales: Dr. B. A. Cook.

40. Standards Association of Australia: (i) Safety Standards Coordinating Committee, Dr. W. E. George; (ii) Sectional Committee on Interior Illumination of Buildings, Dr. J. Davis; (iii) Committee of Standards of Laboratory Glassware and Volumetric Glassware, Dr. F. S. Hansman; (iv) New South Wales Committee on Protective Occupational Clothing, Dr. J. H. Blakemore; (v) Paint and Varnish Sub-Committee, No. 8, Dr. J. H. Blakemore; (vi) New South Wales Committee on Eye Protection, Dr. J. Davis; (vii) Sectional Committee on Measuring Cups and Spoons, Dr. W. W. Ingram; (viii) New South Wales Committee on Industrial Respiratory Protective Devices, Dr. W. E. George.

41. Special Committee appointed by Minister for Health to Investigate Deaths under Anesthesia: Dr. C. A. Sara; Alternative Representative: Dr. Noel Bartrop.

42. British Medical Association Annual Meeting, Auckland, February, 1961: Dr. Hugh Hunter.

43. Australian Post-Graduate Federation in Medicine, Conference on Post-Graduate Medical Education, August, 1960: Dr. P. A. Tomlinson, Dr. J. K. Maddox, Dr. Nicholas Larkins.

Council.

(a) The attendance of members of the Council and of the standing committees was as set out in the accompanying table.

(b) The representatives of the Local Associations of members appointed on the invitation of the Council to attend the regular quarterly meetings of the Council were as follows: Dr. A. W. Raymond (Blue Mountains); Dr. M. M. Ramsden (Border); Dr. J. F. Banfield (Brisbane Water); Dr. G. I. Cole (Broken Hill); Dr. L. Abramovich (Canterbury-Bankstown); Dr. R. V. Dan (Central Northern); Dr. D. C. Henchman (Central Southern); Dr. G. N. M. Aitkens (Central Western); Dr. J. R. O. Roger (Eastern District); Dr. R. K. Reid (Eastern Suburbs); Dr. G. H. M. Wallace (Far South Coast and Tablelands); Dr. A. J. R. Clarke (Hunter Valley); Dr. A. F. Hornbrook (Illawarra Suburbs); Dr. D. N. Short (Kuring-gai); Dr. F. K. Bell (Nepean Hawkesbury); Dr. J. H. Priestley (Northern District); Dr. T. L. Roberts (North Eastern); Dr. J. F. Ackary (Port Hacking); Dr. G. Pattison (Southern District); Dr. P. J. Geddes (South Eastern); Dr. C. H. Jaede (South Sydney); Dr. Margery Scott-Young (Warringah District); Dr. K. B. Redmond (Western); Dr. S. A. Bonnette (Western Suburbs).

Library.

Dr. D. G. Hamilton was appointed to the position of Honorary Librarian.

Visitors to the Library . . .	7,424
Books lent to Members . . .	1,175
Journals lent to Members . .	6,288
Books added to the Library . .	211
Journals added to the Library . .	9

Due to an ever increasing demand for inter-library loans the figures for the numbers of visitors to the Library have decreased slightly in comparison with those for last year, but the number of books and journals borrowed has increased by 558 items.

The photocopying service is being used more frequently and over the last 12 months 158 requests were received, representing 249 articles, a total of 1,735 pages.

The preparation of a new printed catalogue of recent books added to the Library, and the complete periodical

holdings, is nearing completion and it is anticipated that the catalogue will be available for distribution to members and various allied and scientific libraries within the next three months.

Periodical holdings now total 910 titles, of which 506 are currently received, 224 by purchase and 282 by donation. The total number of titles includes 177 titles published in the following languages: Afrikaans, Danish, Dutch, Finnish, French, German, Indonesian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Serbo-Croatian, Spanish, Swedish, and Turkish.

The Council is desirous of conveying its appreciation to the following for donations of books, periodicals, etc.: The Editor, THE MEDICAL JOURNAL OF AUSTRALIA; Abbott Laboratories; Australian Dental Association; Dr. Bernard Bloch; Blood Transfusion Service; Dr. A. E. Chaffer; Ciba Company Limited; Dr. J. Cobley; Commonwealth X-ray and Radium Laboratories; Dr. B. A. Cook; Dr. C. B. Cox; Drug Houses of Australia; Dr. H. J. Elzenberg; Dr. F. S. Hansman; Dr. Godfrey M. Harris; Dr. R. Jeremy; Johnson & Johnson Proprietary Limited; Dr. P. M. Marnie; National Foundation, New York; National Kidney Disease Foundation; New South Wales Department of Public Health; New South Wales Group of the Australian Rheumatism Association; New South Wales State Cancer Council; Dr. Alexander Owen; Pfizer Corporation; Dr. P. Selfert; Dr. K. E. Shellshear; E. R. Squibb and Sons; Dr. K. W. Starr; Dr. E. H. Stokes; Sydney Hospitalers; United Kingdom Information Service; United States Information Library; United States, Surgeon General's Office Library; University of Melbourne; Dr. William Wood; Dr. W. M. Woodward; Medical and Chirurgical Faculty of the State of Maryland Library; American College of Surgeons; Vanderbilt University School of Medicine Library, Tennessee; Queensland Institute of Medical Research; Post-Graduate Committee in Medicine, University of Sydney; National Nephrosis Foundation Incorporated; The College of Radiologists of Australasia; Dermatological Association of Australia (B.M.A.); Oto-Laryngological Society of Australia, New South Wales Section (B.M.A.); Section of Obstetrics and Gynaecology.

Affiliated Local Associations of Members.

Blue Mountains (affiliated 1944): *Chairman*, Dr. K. Fields; *Honorary Secretary*, Dr. A. W. Raymond. Membership 28. Four meetings were held.

Border (affiliated 1908): *Chairman*, Dr. S. J. Goddard; *Honorary Secretary*, Dr. J. S. Woodhouse. Membership 25. Eight meetings were held.

Brisbane Water District (affiliated 1948): *Chairman*, Dr. A. B. Paul; *Honorary Secretary*, Dr. H. Reni. Membership 25. Four meetings were held.

Broken Hill (affiliated 1942): *Chairman*, Dr. G. B. Fisk; *Honorary Secretary*, Dr. D. I. Cole. Membership 18. Nine meetings were held.

Canterbury-Bankstown (affiliated 1930): *Chairman*, Dr. A. F. V. Musso; *Honorary Secretary*, Dr. A. Rumore. Membership 92. Four meetings were held.

Central Northern (affiliated 1910): *Chairman*, Dr. J. W. Muller; *Honorary Secretary*, Dr. R. V. Dan. Membership 77. Three meetings were held.

Central Southern (affiliated 1909): *Chairman*, Dr. F. B. Uther; *Honorary Secretary*, Dr. D. C. D. Henchman. Membership 83. Three meetings were held.

Central Western (affiliated 1910): *Chairman*, Dr. J. K. McKenzie; *Honorary Secretary*, Dr. L. P. H. Jeffery. Membership 75.

Eastern District (affiliated 1913): *Chairman*, Dr. H. E. Masters; *Honorary Secretary*, Dr. E. Barbour. Membership 46. Two meetings were held.

Eastern Suburbs (affiliated 1911): *Chairman*, Dr. G. R. Faithfull; *Honorary Secretary*, Dr. H. N. Merrington. Membership 165. Four meetings were held.

Far South Coast and Tablelands (affiliated 1935): *Chairman*, Dr. J. McKee; *Honorary Secretary*, Dr. R. Glass. Membership 28. Two meetings were held.

Hunter Valley (affiliated 1947): *Chairman*, Dr. T. Galbraith; *Honorary Secretary*, Dr. K. Higgins. Membership 61. Six meetings were held.

Illawarra Suburbs (affiliated 1913): *Chairman*, Dr. R. Hertzberg; *Honorary Secretary*, Dr. A. F. Hornbrook. Membership 160. Seven meetings were held.

Kuring-gai District (affiliated 1929): *Chairman*, Dr. N. P. Breden; *Honorary Secretary*, Dr. P. E. Gunton. Membership 142. Three meetings were held.

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ATTENDANCE AT COUNCIL AND STANDING COMMITTEE MEETINGS, JANUARY 1, 1960, TO MARCH 31, 1960.

Council.	Committee.					
	Executive and Finance.	Organization and Science.	Medical Politics.	Hospitals.	Ethics.	Public Relations.
ALEXANDER, K. W.	4	—	2	—	—	—
ALEXANDER, M. S. President	4	3	2	1	1	1
BOOTH, E. A.	—	1	—	—	—	2
BROWN, D. A.	—	—	2	—	—	2
CALOV, W. L.	—	—	—	—	—	—
COLBEY, J. F. C. C.	—	1	1	1	1	—
COOK, B. A. President-Elect ¹	—	1	—	—	1	—
HAMILTON, D. G.	—	1	—	—	—	1
HOWE, G. L.	—	—	—	—	—	—
JONES, K. S.	—	—	—	—	—	—
MACDONALD, R. H.	—	—	—	—	1	—
MCGUINNESS, A. E.	—	—	—	—	—	—
MONAHAN, B. W.	—	—	3	—	—	—
MORROW, SIR WILLIAM. Past President	—	1	—	—	—	—
MURRAY, A. J.	—	—	—	—	—	—
NELSON, T. Y. Honorary Secretary	—	—	—	—	1	1
PAUL, J. A.	2	—	—	—	—	—
PAUCKY, MARY C.	—	1	—	—	—	—
RAWLE, K. C. T.	—	—	—	—	—	—
SIMMONS, W. F. Honorary Treasurer	4	3	3	—	—	2
STUCKEY, E. S.	—	—	—	—	—	—
THOMSON, E. F.	—	—	—	—	—	1
TOMLINSON, P. A.	—	—	—	—	—	—
WARDEN, D. A.	—	—	1	1	1	—
WING, L. W.	4	—	3	—	—	—
Meetings held	4	3	1	3	1	2

¹ Leave of absence granted from December 11, 1959, to January 1, 1960.

Nepean Hawkesbury (affiliated 1957): *Chairman*, Dr. W. F. J. Cammack; *Honorary Secretary*, Dr. J. J. Bain. Membership 25. Five meetings were held.

Northern District (affiliated 1911): *Chairman*, Dr. H. G. Royle; *Honorary Secretary*, Dr. J. H. Priestley. Membership 93. Three meetings were held.

North Eastern (affiliated 1913): *Chairman*, Dr. L. Jabour; *Honorary Secretary*, Dr. N. J. Rogers. Membership 67. Three meetings were held.

Port Hacking (affiliated 1960): *Chairman*, Dr. E. H. Miles; *Honorary Secretary*, Dr. J. F. Ackary.

South Eastern (affiliated 1914): *Chairman*, Dr. B. S. Hilliar; *Honorary Secretary*, Dr. P. J. Geddes. Membership 77.

Southern District (affiliated 1909): *Chairman*, Dr. R. A. Lewis; *Honorary Secretary*, Dr. G. Pattison. Membership 53. Six meetings were held.

South Sydney (affiliated 1909): *Chairman*, Dr. M. S. Walker; *Honorary Secretary*, Dr. C. H. Jaede. Membership 16.

Warringah District (affiliated 1929): *Chairman*, Dr. D. C. Williams; *Honorary Secretary*, Dr. P. Cambourn. Membership 241. Seven meetings were held.

Western (affiliated 1908): *Chairman*, Dr. G. C. Palmer; *Honorary Secretary*, Dr. S. R. Dawes. Membership 111. Three meetings were held.

Western Suburbs (affiliated 1908): *Chairman*, Dr. L. A. Brown; *Honorary Secretary*, Dr. Warren Smith. Membership 119. Three meetings were held.

Annual Meeting of Delegates.

The forty-seventh annual meeting of delegates of the affiliated associations of members with the Council was held on Friday, September 30, 1960.

ATTENDANCE AT COUNCIL AND STANDING COMMITTEE MEETINGS, APRIL 1, 1960, TO DECEMBER 31, 1960.

Council.	Committee.					
	Executive and Finance.	Organization and Science.	Medical Politics.	Hospitals.	Ethics.	Public Relations.
ALEXANDER, K. W.	7	—	9	—	—	—
ALEXANDER, M. S. Past President	8	7	—	—	—	—
BOOTH, E. A.	8	6	—	—	—	3
BROWN, D. A.	5	—	6	—	—	—
CALOV, W. L.	9	—	—	6	—	4
COLBEY, J. F. C. C.	6	—	—	6	4	—
COOK, B. A. President ¹	9	6	4	3	5	5
HAMILTON, D. G.	6	3	—	5	—	—
HOWE, G. L.	8	3	—	—	3	—
JONES, K. S.	6	—	8	—	—	—
MACDONALD, R. H.	9	8	5	5	7	—
MCKINNON, M. C. ²	7	—	—	—	—	—
MCGUINNESS, A. E.	5	—	—	—	—	—
MONAHAN, B. W.	8	—	6	—	—	—
MURRAY, A. J.	8	6	—	7	—	—
NELSON, T. Y. Honorary Secretary	9	8	4	6	7	5
PAUL, J. A. ³	6	6	—	—	—	5
PAUCKY, MARY C.	5	3	—	7	—	5
RAWLE, K. C. T.	6	2	—	7	2	2
SIMMONS, W. F. Honorary Treasurer	6	6	5	9	7	1
STUCKEY, E. S. President-Elect ¹	9	7	5	8	2	4
THOMSON, E. F.	7	—	—	—	—	—
TOMLINSON, P. A.	8	—	—	5	4	—
WING, L. W.	7	3	7	—	—	—
Meetings held	9	8	6	9	8	5

¹ Elected March 31, 1960.² Elected to Council March 31, 1960.

The delegates present at the meeting were as follows: Border, Dr. M. M. Ramsden; Brisbane Water, Dr. J. F. Banfield; Canterbury-Bankstown, Dr. L. Abramovich; Central Northern, Dr. R. V. Dan; Central Southern, Dr. D. C. Henchman; Central Western, Dr. G. N. M. Aitkens; Eastern District, Dr. R. B. Vickery; Eastern Suburbs, Dr. J. G. Watson; Hunter Valley, Dr. A. J. R. Clarke; Illawarra Suburbs, Dr. A. F. Hornbrook; Kuring-gai District, Dr. C. Warburton; Nepean Hawkesbury, Dr. P. K. Bell; Northern District, Dr. J. H. Priestley; North Eastern, Dr. T. L. Roberts; Southern District, Dr. G. Pattison; South Eastern, Dr. P. J. Geddes; South Sydney, Dr. J. G. O'Neill; Warringah District, Dr. Margery Scott-Young; Western, Dr. G. B. Downes; Western Suburbs, Dr. S. A. Bonnette.

Special Groups for the Study of Special Branches of Medical Knowledge.

Allergy (inaugurated 1947): *Chairman*, Dr. L. E. Hewitt; *Honorary Secretary*, Dr. D. O. Cross. Membership 18. Five meetings were held, one in conjunction with a meeting of the Branch.

Anæsthesia (inaugurated 1934): *Chairman*, Dr. C. A. Sara; *Honorary Secretary*, Dr. B. J. Pollard. Membership 115. Six meetings were held, two in conjunction with meetings of the Branch.

Australian Rheumatism Association (British Medical Association), New South Wales Group (inaugurated 1960): *Chairman*, Dr. B. G. Haynes; *Honorary Secretary*, Dr. R. G. Robinson. Membership 41. Three meetings were held.

Medicine (inaugurated 1924): *Chairman*, Dr. K. S. Harrison; *Honorary Secretary*, Dr. L. C. A. Watson. Membership 56. Five meetings were held, three in conjunction with meetings of the Branch.

Neurology, Psychiatry and Neurosurgery (inaugurated 1924): *Chairman*, Dr. E. T. Hillard; *Honorary Secretary*, Dr. C. Radeski. Membership 103. Two meetings were held in conjunction with meetings of the Branch.

Obstetrics and Gynaecology (inaugurated 1925): *Chairman*, Dr. S. Devenish-Meares; *Honorary Secretary*, Dr. D. H. McGrath. Membership 100. Two meetings were held in conjunction with meetings of the Branch.

Occupational Medicine (inaugurated 1952): *Chairman*, Dr. J. F. Ireland; *Honorary Secretary*, Dr. W. P. Nelson. Membership 20. Five meetings were held.

Orthopaedic Group (British Medical Association) (inaugurated 1923): *Chairman*, Dr. K. R. Daymond; *Honorary Secretary*, Dr. R. W. D. Middleton. Membership 44. Seven meetings were held, two in conjunction with meetings of the Branch.

The Oto-Laryngological Society of Australia, New South Wales Section (inaugurated 1924): *Chairman*, Dr. G. C. Halliday; *Honorary Secretary*, Dr. B. P. Scrivener. Membership 61. Six meetings were held, one in conjunction with a meeting of the Branch.

Pædiatrics (inaugurated 1924): *Chairman*, Dr. M. L. Edwards; *Honorary Secretary*, Dr. J. D. McDonald. Membership 105. Two meetings were held in conjunction with meetings of the Branch.

Pathology (inaugurated 1924): *Chairman*, Dr. A. A. Palmer; *Honorary Secretary*, Dr. K. Viner Smith. Membership 96. Four meetings were held, one in conjunction with a meeting of the Branch.

Radiology (inaugurated 1926): *Chairman*, Dr. H. G. Benson; *Honorary Secretary*, Dr. B. E. Frecker. Membership 122. Five meetings were held, two in conjunction with meetings of the Branch.

Surgery (inaugurated 1925): *Chairman*, Dr. J. Stelgrad; *Honorary Secretary*, Dr. T. E. Wilson. Membership 44. Two meetings were held in conjunction with meetings of the Branch.

Urology (inaugurated 1940): *Chairman*, Dr. M. S. S. Earlam; *Honorary Secretary*, Dr. H. G. Cummine. Membership 11. One meeting was held in conjunction with a meeting of the Branch.

Federal Council of the British Medical Association in Australia.

The Federal Council met at Melbourne on February 26, 27, 28 and 29, 1960; at Adelaide on August 5, 6 and 7, 1960, and at Sydney on November 25 and 27, 1960.

The Branch was represented at the three meetings by Dr. A. J. Murray, O.B.E., Dr. W. F. Simmons, Dr. R. H. Macdonald, O.B.E., and Dr. E. F. Thomson.

Australian Medical Association.

There having been a general approval of all the Branches to the formation of an Australian Medical Association, the Federal Council decided to hold a Convention to consider a constitution for the proposed Association. This convention was held on Saturday 26 and Sunday 27, November, 1960, the New South Wales Branch being represented by 22 members, apart from its four representatives on the Federal Council.

A report of the Convention appeared in the issue of THE MEDICAL JOURNAL OF AUSTRALIA of December 17, 1960.

In order that the representatives of the Branch at the Convention would be presented with the views of the profession in New South Wales, a Special Meeting of Delegates of Local Associations was held with Members of Council on Sunday, November 13, 1960.

Prior to this meeting, each member of the New South Wales Branch was forwarded a copy of the draft constitution and it was suggested to each member that he should attend any meeting of the Local Association which may be called to consider the matter.

The following views were amongst those expressed at the Special Meeting of Delegates of Local Associations with Council:

Constitution:

The Australian Medical Association should be a Federacy of the Constituent Associations.

Objects:

An object additional to those in the draft constitution should be introduced, viz.:

To do what can be done to preserve the health not only of the individual but also of the community, respecting at all times the dignity of the individual and the integrity of his personality.

Affiliated Organizations:

Affiliation should continue without interruption unless either party to the affiliation gave three months' notice to the other in writing of its intention to withdraw from the affiliation.

Federal Assembly:

Approval was given in principle to the formation of a Federal Assembly. The meeting considered that the Assembly should consist of such officers as would be elected ex officio by the Assembly, representatives of Constituent Associations on the Assembly and representatives of Affiliated Bodies.

Federal Council:

It was the view of the meeting that the name of the Federal Council should be altered to the Federal Executive Committee and that it should be appointed by and from the Federal Assembly on a non-State and non-sectional basis.

It was considered that in the event of the Federal Council not being elected in accordance with these provisions, it should be constituted on a more representative basis than that proposed in the draft constitution.

With regard to the membership of the Federal Council it was considered that it should not exceed 12 in number, including the ex-officio officers.

Officers:

There should be the following officers who would be ex-officio members of the Federal Council, viz.: President, Vice-President and Honorary Treasurer.

Committees:

The opinion was expressed that in addition to the President of the Association, the Chairman of the Federal Council and the Honorary Treasurer being ex-officio members of all committees, the Vice-President should also be a member.

Approval was given to their being Standing Committees of the Association with power to co-opt, called by the names, composed in the manner and having powers and duties as defined in the by-laws. It was considered that every Standing Committee should have power to appoint sub-committees for the purpose of any of its powers or duties and any such sub-committee might co-opt persons not members of the Association.

The establishment of the following three Standing Committees, viz.: General Practitioners' Committee, Specialists'

Committee and Salaried Officers' Committee, was approved in principle.

Appointive Officials:

It was agreed that the appointive officials should be a General Secretary and such other officials as may be appointed by the Federal Council, the General Secretary to be Secretary also of the Federal Council and the Federal Assembly and to be a member *ex officio* of all Committees of the Association. The appointive officials would have no votes at any meetings of the Association or its Committees, but would be entitled to take part in the discussions.

Branch Council—Constitution of.

In the event of the Australian Medical Association being formed, it will be necessary, of course, for changes to be made in the constitution of the New South Wales Branch.

One of the changes will be in connexion with the constitution of Council and this matter is at present receiving the attention of Council.

World Medical Association.

The XIVth General Assembly of the World Medical Association was held in West Berlin, September 16-22, 1960.

The Federal Council, a constituent member of the World Medical Association, was represented by Dr. L. R. Mallen, South Australia, who was the Chairman of Council of the World Medical Association, and by the following Delegates, viz.: Dr. J. G. Hunter, New South Wales, Dr. A. E. Lee, Queensland, and alternate Delegate Professor Gordon King, Western Australia.

The Assembly elected Dr. J. G. Hunter to the Council for the period 1960-1963.

The next Assembly will be held in Rio de Janeiro, Brazil, in September, 1961.

Extraordinary General Meeting.

July 27, 1960.

On the evening of Wednesday, July 27, 1960, two Extraordinary General Meetings of the Association were held, one at 8 p.m. on the requisition of 20 members of the Illawarra Suburbs Medical Association and the other at 9 p.m. on the requisition signed by 22 members of this Association.

The requisition for the first meeting was for the purpose of "discussing and taking some action in regard to the threatened nationalization of the profession".

This meeting commenced at 8 p.m., adjourned at 9 p.m. to permit of the commencement of the second meeting and resumed later following its termination.

At this meeting four resolutions were adopted. These and the decisions of Council in regard thereto are set out later.

The requisition for the second meeting was "to consider as a matter of special business and vote upon the following resolutions"—which resolutions were set out in the notice convening the meeting.

The resolutions were ruled out of order in that they were *ultra vires* the Articles of Association.

The resolutions of the first meeting and the decisions of Council in regard thereto were as follows:

Resolution 1.

"That it be a recommendation to Federal Council that it refuse to accept any further extension to the National Health Scheme until members have had sufficient time to vote on its acceptability."

This resolution was approved by Council. To make it more explicit the words "of the Association" should be inserted after the word "members".

Resolution 2.

"That this Meeting considers Federal Council should be requested not to enter into any further agreements with the Federal Government without first conducting a plebiscite of all members throughout Australia through its State Councils."

This resolution was not approved by Council. The manner in which the views of members of the profession should be obtained is a matter for each Branch and therefore Council resolved:

"That Council considers Federal Council should be requested not to enter into any further agreements with the Federal Government without first ascertaining the

views of members of the Association through the Branch Councils either by plebiscite or by other means."

Resolution 3.

"That the New South Wales Branch of the British Medical Association expresses its continued opposition to the recent extension of the Pharmaceutical Benefits Act, and considers that the only General Pharmaceutical Benefits Scheme acceptable to the profession is one which is administered at the Government-Pharmacist level without any active participation by the medical profession."

This resolution was approved. It is to be noted that the resolution referred to the "Pharmaceutical Benefits Act". There is, of course, no separate Pharmaceutical Benefits Act. Reference should be made to the Pharmaceutical Benefits Scheme which is governed by the National Health Act.

Resolution 4.

"That it is a recommendation to Council—

- (a) That a Committee be formed to be known as the Standing Anti-Nationalization Committee. Membership of this Committee would consist of four Council Members and six non-Council Members (representing a true cross-section of the profession), to be co-opted and chosen by Council. The Committee would have access through Council to consultant legal opinion. The Committee would be responsible to Council and would not negotiate directly with Governments.
- (b) That the Standing Committee's function would include the following:
 - (i) To publish and distribute a history of attempts at nationalization over the past 40 years or so.
 - (ii) To publicize a series of bulletins explaining the conditions of the profession in the United Kingdom.
 - (iii) To keep the profession informed of assessments and implications of Government Health Policies.
 - (iv) To work through State and Federal Councils for the establishment of similar Committees in each of the other States.
 - (v) To work in the closest co-operation with the Medical Politics Committee.
 - (vi) To make constructive alternative suggestions to unacceptable Government Schemes."

Having regard to the present constitution of Council and workings of its Standing Committees and to the fact that of these Committees one in particular, the Medical Politics Committee, has for many years dealt with problems concerning National Health Service, the Council decided not to approve of the resolution. However, with a view to meeting the wishes of the profession in the most practical way, in accordance with the spirit of the resolution, it decided to co-opt six non-members of Council to the Medical Politics Committee.

An invitation was extended to each of the 24 Local Associations to nominate one of its members for co-option to the Medical Politics Committee. Eight Local Associations replied.

The following six non-members were co-opted to the Committee:

- Dr. W. Doherty (Canterbury-Bankstown Medical Association);
- Dr. R. V. Dan (Central Northern Medical Association);
- Dr. J. G. Watson (Eastern Suburbs Medical Association);
- Dr. Lionel Wilson (Illawarra Suburbs Medical Association);
- Dr. J. J. Bain (Nepean-Hawkesbury Medical Association) and
- Dr. Margery Scott-Young (Warringah District Medical Association).

Pharmaceutical Benefits—Extension of.
A great deal of consideration was given to this matter during the year.

In the early part of the year, prior to the introduction of the extended Pharmaceutical Benefits, the Council informed Federal Council that it was of the opinion that

the profession should refuse to co-operate in implementing the scheme on the following grounds:

- (i) That the new scheme goes far beyond the agreement by the profession to co-operate in providing a limited list of costly and life-saving drugs to the community. An agreement to provide a comprehensive pharmaceutical service to pensioners in no way implies an agreement to extend these services to the whole community.
- (ii) That it must lead to economic sanctions being imposed on the profession in its prescribing and so would interfere with the doctor/patient relationship.
- (iii) That it is likely to endanger the financial stability of medical benefits funds.
- (iv) That it is considered there will be a greatly increased cost to the community for which the profession will later be held responsible.
- (v) That the scheme imposes increasing control on the medical profession by regulations.
- (vi) That it will entail the medical profession in a vast increase in clerical work.

The above views, together with the views of other Branches, were considered by the Federal Council at its meeting on February 20, 1960.

The Representatives of the New South Wales Branch on the Federal Council strongly put the views of the Branch before the Meeting and did their utmost to convince the other Branches that the profession should not co-operate with the Government, but should continue to prescribe the drugs on the free list prior to March 1, 1960.

Of the other five Branches, Queensland, although in favour of non-co-operation, was opposed to prescribing any pharmaceutical benefits except those on the restricted list, and the four remaining Branches adhered to their decision to co-operate. So by a majority decision, the Federal Council decided to recommend to members throughout Australia that they co-operate with the Government in the implementation of the scheme.

At the same time the Federal Council deplored the action of the Commonwealth Government in framing the amendments to the National Health Act dealing with Pharmaceutical Benefits without any prior reference to the profession and in commencing the Scheme without allowing the profession sufficient time to familiarize themselves with the altered list of drugs.

Following the introduction of the Scheme on March 1, 1960, the Council, still firmly believing that its decision was the correct one in all the circumstances and was in the public interest, expressed the desire to have the whole question reconsidered by the Federal Council at a Special Meeting. With a view to indicating clearly to other Branches the views of the members of the New South Wales Branch, the Council decided to conduct a plebiscite among its members, they being asked to state whether or not they desired to co-operate in the provision of extended pharmaceutical benefits.

The plebiscite, whilst not completely satisfactory, gave a result from which it was obvious that the profession was greatly dissatisfied with the Scheme. This dissatisfaction, in Council's opinion, was sufficient to justify urgent reconsideration being given by Federal Council to the decision made at its meeting on February 26, 1960, and a request for such a meeting was made accordingly. The Council felt that at such a meeting not only should the question of further co-operation in the scheme be discussed, but also the matter of alternative schemes.

The Council recommended to Federal Council that in the event of Federal Council deciding to recommend to the profession not to co-operate in the scheme, it should also recommend that members continue to prescribe as before March 1, 1960, until a satisfactory scheme had been worked out between the Federal Council and the Government.

At the same time, letters were sent to Branches recommending that they take a plebiscite of their members and seeking their help in the calling of a special meeting of Federal Council. However, as the request for a special meeting of Federal Council must come from three Branches, and as the necessary help in this regard was not forthcoming, the special meeting was not called.

National Health Service: Pensioner Medical Service.

Participation of Specialists in the Service.

It has always been the considered opinion of the Association that the pensioner medical service is a general

practitioner service. It came to the notice of Council during the year that specialists were being accepted into the service.

When the specialist is accepted into the service he is sent a letter in the course of which it is stated:

"A specialist may practise his specialty within the terms of the Pensioner Medical Service and he may also, if he so desires, treat pensioner patients on a general practitioner basis. If the specialist is restricting his participation in the Pensioner Medical Service to certain ailments only, he should make this clear to his pensioner patients and advise them to consult some other participating doctor in respect of the additional service. Where a specialist is prepared to practise as a specialist within the Pensioner Medical Service, he is not permitted to charge any fee or part of a fee other than the approved mileage or after-hours fees where applicable for treatment rendered within the Service. In this connexion, however, it is important to bear in mind that a doctor must treat all his pensioner patients on the same basis. In other words, he must not charge some pensioners a fee on the grounds that the treatment is outside the scope of the Pensioner Medical Service, while others are treated free under the Service."

It was decided to bring the matter to the notice of the Federal Council with a recommendation that a protest be made to the Director General of Health about extending the service without reference to Federal Council.

The Federal Council decided to take the matter up with the Minister for Health who replied that a paragraph in his letter to Federal Council under date of March 18, 1958, merely defined the scope and nature of the medical service covered by the Pensioner Medical Service. It did not define the status of the medical practitioner who might be enrolled in the service, nor did it restrict participation to general practitioners. If a specialist was prepared to provide those medical services in accordance with the terms and conditions of the agreement, he could be enrolled as a participating doctor.

Council decided to advise Federal Council that in its opinion the present Pensioner Service is a general practitioner service and should be restricted to members of the profession practising as general practitioners. It was also decided to ask Federal Council to take the matter up again with the Minister for Health.

Council further resolved to recommend to Federal Council that it should seek the views of the Royal Australasian College of Surgeons, The Royal Australasian College of Physicians and other Specialist bodies in regard to the participation of specialists in a specialist service for pensioners.

Hospital Policy.

The Hospitals Committee was asked by Council to give consideration to the present hospital policy. For this purpose the Committee was given certain terms of reference.

Following consideration of these terms of reference, certain recommendations were made to Council for its consideration.

The terms of reference and the ultimate decisions of Council were as follows, viz.:

(i) Honorary Service:

- (a) Whether the system of honorary medical officers should continue or be replaced by—
 - (i) a system of wholly full-time salaried medical officers; or
 - (ii) a system in which the medical staff is paid on a sessional basis; or
 - (iii) a system in which the medical staff gives its services part-time and is paid on a salaried basis.

It was decided by Council not to support a system of wholly full-time salaried medical officers. Further, Council could not agree that the system should be replaced by one in which the visiting medical staff is paid on a sessional basis for attending properly classified public patients.

- (b) Whether there should be an integration of fully paid staff and visiting staff in the same hospital.

It was the decision of Council that there should be such an integration of staffs.

(2) Classification of Patients:

- (a) Does the classification of patients, as set out in the present Hospital Policy, need revision?
- (b) If so, in what manner should it be revised?

The Council's decision was that the suggested classification of patients as set out in the present Hospital Policy does not require revision.

(3) General Practitioner Service:

Should the position of the local general practitioner in each particular type of hospital be classified as regards:

- (a) Associate Medical Officer?
- (b) Medical Officer in Charge of Beds?
- (c) Classified Physician or Surgeon in Charge of Beds?

The decision of Council was that honorary medical officers in base hospitals should be permitted the right to the charge of beds and should not be restricted to medical or surgical divisions.

(4) General:

- (a) Does the Committee consider that other aspects of the Hospital Policy should be amended?
- (b) If so, in what manner should the other aspects of the Policy be amended?

Council decided that the Hospital Policy should not be amended in other aspects.

Public Hospitals Act.

At the end of 1959, the Public Hospitals Act was amended to provide for the retirement of Chief Executive Officers, including Medical Superintendents and Matrons, on reaching the age of 65 years.

Representations were made to the Minister for Health to have the Act further amended to provide that it be at the discretion of the Board of the Hospital to extend the service of any such officer by yearly intervals until the officer reached the age of 70 years. However, the representations were unsuccessful.

Accreditation of Hospitals Questionnaire.

A fact-finding questionnaire was drawn up by the Committee on Accreditation of Hospitals and was approved by The Hospitals Commission of New South Wales.

The questionnaire was forwarded to the four general teaching hospitals, the special teaching hospitals and seven other large hospitals.

Poliomyelitis Vaccine.

In the latter part of the year, the Commonwealth Government decided to allow Salk Vaccine to be issued to private practitioners.

The conditions under which Poliomyelitis Vaccine, Double Antigen (Poliomyelitis and Tetanus) and Quadruple Antigen are to be issued to private practitioners were drawn up by the National Health and Medical Research Council.

They are as follows:

- (i) Antigen will be supplied without charge to State Health Authorities and to approved Local Health Authorities by the Commonwealth Serum Laboratories in multiple and single dose phials as required. The receiving authorities will be responsible for the appropriate storage and correct release of the Antigen and the maintenance of the appropriate immunization record.
- (ii) For record purposes, the Committee recommends that a standard immunization card, similar to that currently used as the record for Poliomyelitis immunization, should be used.
- (iii) The approved local authorities will be required by the State Health Authorities to conduct two immunization campaigns for infants each year using quadruple Antigen and making no charge for the service or for the Antigen.
- (iv) Subject to (iii) above, Antigen may be supplied by the State Distributing Authorities without charge to medical practitioners for the immunization of patients privately. The following conditions will apply:
 - (a) The Antigen will be issued on requisition to the practitioner himself or to his authorized agent, but in no circumstances to the patient or to a member of the public;
 - (b) The distributing authority will hold the practitioner responsible for completing the appropriate

record and returning it within a specified time together with any unused Antigen;

- (c) The Medical Practitioner will undertake to make no charge for the Antigen used;

- (d) If the distributing authority is satisfied that excess dosage, resulting from the non-attendance of patients at appointments, can be safely stored by the medical practitioner, it may authorize retention of the excess Antigen by the practitioner under appropriate conditions for a period not exceeding 14 days.

Unused Antigen temporarily stored by the practitioner under these conditions must be returned to the distributing authority within this time. In the alternative, excess dosage must be returned promptly and stored by the Authority.

- (v) The Commonwealth Serum Laboratories will issue special circulars warning medical practitioners, State Health Authorities, approved Local Health Authorities and other persons handling prophylactics, of the special precautions to be taken to preserve the potency of the product and in particular, the proper methods of storage of Antigens.

The distribution of the Antigen by Local Authorities has proved unsatisfactory and, consequently, Council has found it necessary to take steps to have the method of distribution reconsidered.

Repatriation Department.*Extension of Medical Services to Service Pensioners for Disabilities Not Due to War Service.*

A recommendation was made to Federal Council that the strongest possible protest be made to the Minister for Repatriation in regard to his action in extending medical benefits to Ex-Servicemen and Ex-Servicewomen who are service pensioners without first consulting the medical profession.

Committee on Medical Education.

During the year the Committee on Medical Education submitted to Council a "Report on Medical Education—Part II.—Bed Requirements of Teaching Hospitals".

With the completion of this Report, the Council decided that the Committee appointed at the Extraordinary General Meeting of the Association on February 12, 1958, had carried out the task allotted it and should be disbanded.

Members of the Committee were thanked for the excellent work carried out by them and there was placed on record the Council's appreciation of the invaluable assistance which Professor C. G. Lamble had given to the Committee.

Court Witnesses' Fees.*Supreme Court of New South Wales.*

Following agreement reached between the Incorporated Law Institute of New South Wales and Council, representations were made to the Prothonotary of the Supreme Court to have increased the fees payable to medical practitioners giving evidence in Civil cases in the Supreme Court.

Advice was received that the rules of the Supreme Court have been amended to provide the following fees in civil actions:

91: Barristers, solicitors, medical practitioners, surveyors, architects, accountants and other professional persons	£6 6 0
or per hour	£4 4 0
91A: Wherever the persons mentioned in 91 are called upon to give expert evidence and not evidence of fact	£7 7 0
or per hour	£5 5 0
91B: Travelling allowance—Payment to be made at the rate of ten shillings (10/-) per mile, one way, after the first eight miles, and up to 50 miles. Thereafter payment to be made on the basis of time absent from practice, namely, one day—£31/10/-; in each case, together with the actual cost of travelling.	

Fees Payable to Legally Qualified Medical Practitioners for Services Rendered on Behalf of the Government on Request.

Representations have been made to the Director-General of Public Health to have increased the fees payable to legally qualified medical practitioners for services rendered on behalf of the Government on request.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Balance Sheet as at December 31, 1960.

FIXED LIABILITIES.				FIXED ASSETS.			
		f	s	d	f	s	d
Debentures—							
213-4-65% Series "B" at £50 each	10,650	0	0	Land and Buildings—B.M.A. House	115,112	9	0
5-4-65% Series "C" at £10 each	50	0	0	at Cost less Depreciation	7,945	0	1
	10,700	0	0	Office Furniture and Equipment—	5,015	8	8
General Reserve Fund (used in				at Cost less Depreciation	110	15	1
Branch Business)	2,272	0	0	Debentures in Other Companies—	20,500	0	0
				Australasian Medical Publishing	110	15	1
	12,972	0	0	Co. Ltd.—Face Value	6,000	0	0
CURRENT LIABILITIES.				Deposit on Debentures	154,683	13	10
Sundry Creditors	1,708	19	1	Commonwealth Treasury Bonds—			
Deposit at Call	700	0	0	Face Value			
	2,408	19	1				
OTHER CREDIT BALANCES.				CURRENT ASSETS.			
Subscriptions in Advance—Suspense				Sundry Debtors (after making pro-			
Account	82	2	11	vision for Doubtful Debts,	3,487	6	7
Provision for Long Service Leave	2,900	0	0	Sundry Tenants, Rent, etc.)			
Provision for Painting Buildings	5,600	0	0	Commercial Banking Company of			
Provision for Handbook	2,000	0	0	Sydney Limited—Current Ac-	13,436	5	4
Provision for Library Catalogue	750	0	0	counts			
	11,332	2	11	Cash on Hand	24	14	0
Superannuation Fund Reserves, as					16,948	5	11
per contra	6,341	7	10				
Accumulated Funds—				OTHER DEBIT BALANCES.			
Balance as at December 31, 1959	133,396	19	10	Prepaid Insurances, Rates, etc.	1,378	13	4
Add Surplus for Year—				Superannuation Fund Investments			
Branch	3,416	10	11	Accounts as per contra	6,341	7	10
Premises	9,483	19	4		7,720	1	2
	146,297	10	1				
	£179,351	19	11		£179,351	19	11

B. A. COOK, President.
W. F. SIMMONS, Hon. Treasurer.
J. F. WALKER, Accountant.

AUDITORS' REPORT.

We have examined the foregoing Balance Sheet with the Books of Account of the New South Wales Branch of the British Medical Association, and have obtained all the information and explanations we have required. We are of the opinion that such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs according to the best of our information and the explanations given to us and as shown by the Books of the Company. In our opinion, the Register of Members and other records which the Company is required to keep by the New South Wales Companies Act, 1936, or by its Articles have been properly kept.

F. W. DUESBURY & Co., Chartered Accountants.

Registered under the Public Accountants Registration Act, 1945, as amended.

Sydney,
February 21, 1961.

At the time of preparation of this report, the matter was still under discussion.

Fees in Private Practice.

The Council has had discussions with a firm of accountants of high repute in regard to the advisability of conducting a survey of fees in private practice (general practice) with a view to determining what should be reasonable fees for consultations and visits to meet the added costs of living and of conducting a practice.

Salaries of Medical Officers.

Following recommendations made to The Hospitals Commission of New South Wales, the salaries of full-time Specialists and of Resident Medical Officers were increased.

The recommendations of Council, however, were not fully accepted by the Commission.

In the case of Junior Specialists, the recommendations of Council exceeded those in the Commission's Determination by amounts varying from £34 to £58, and in the case of Specialists in Group B Hospitals, the recommendations exceeded those in the Commission's Determination by amounts varying from £74 to £134. In the Group A Hospitals, the recommendations exceeded the amounts in the Determination by amounts varying from £90 to £154.

The recommendations of Council in connection with the salaries of Resident Medical Officers exceeded those allowed by the Commission by amounts varying from £24 to £60.

Medical Services in Sparsely Populated Areas.

Following representations made by Council, advice was received from the Department of Public Health that the guaranteed income in subsidized practices in sparsely

populated areas had been increased to £2,500 per annum with a maximum subsidy of £1,875 per annum.

School Medical Services.

It was the desire of Council during the year that every help should be given to the Department of Public Health by the profession in the provision of a School Medical Service. However, members of the profession have found difficulty in rendering the necessary help and have been dissatisfied with the method and rate of remuneration for the service. At a result, it has been found necessary for Council to enter into further negotiations with the Department of Public Health.

Notification of Drug Addiction.

As a result of international agreement, it has become necessary for each State in Australia to introduce legislation to provide for the notification of drug addiction. The Council was pleased to offer advice to the Director-General of Public Health in regard to certain proposed amendments to the Police Offences (Amendment) Act.

Superannuation Scheme for Members of the Profession in Private Practice.

The New South Wales Medical Practitioners' Superannuation Fund is now in operation. The Fund is constituted and governed by the provisions of a trust deed dated June 14, 1960.

Since its inception a total of 39 applications for membership of the Fund have been received and approved. Contributions received have been invested in approved securities.

It is confidently anticipated that a considerable number of additional applications for membership of the Fund will be received prior to the close of the financial year on June 30 next.

NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

BRANCH ACCOUNT.

Income and Expenditure Account for the Year Ended December 31, 1960.

	f s d	f s d	f s d
To Salaries	21,284 4 6		54,168 11 7
" Rent of Offices, etc.	1,200 0 0		
" Printing and Stationery	3,841 5 5		
" Stamps and Telegrams	1,334 10 3		
" Telephones	681 18 3		
" Travelling Expenses—General	1,071 3 10		
" Insurances	186 10 2		
" Exchange and Bank Charges	9 4 3		
" Refreshments—Meetings	67 13 6		
" Newspapers and Advertising	73 13 11		
" Sundry Petty Expenses	292 9 11		
" Tea Money	157 10 10		
" Federal Council	5,316 5 0		
" Repairs and Maintenance—			
" Equipment	232 14 10		
" Pay Roll Tax	400 14 1		
" Medical Benefits—Staff	49 0 9		
" Staff Superannuation Funds	1,148 19 5		
" Incidental, Travelling and Entertainment Expenses	334 0 0		
" Stamp Duty	65 18 0		
" Legal Expenses	130 18 0		
" Laundry	30 6 0		
" Branch Prize Medal	108 4 8		
" Public Relations Campaign	320 3 7		
	38,388 9 2		
" Allowance for Depreciation—			
" Library	2,840 7 9		
" Furniture and Equipment	331 16 6		
	3,172 4 3		
" Provision for Long Service Leave	200 0 0		
" Surplus for the Year transferred to Accumulated Funds	3,416 10 11		
	f 45,177 4 4		
			f 45,177 4 4

The New South Wales Committee for World Refugee Year.

Following receipt of a communication from the Chairman of the New South Wales Committee for World Refugee Year, support was given to the decision of the Committee in New South Wales and other States to conduct a nation-wide 'Door to Door' Appeal. The Appeal was commended to members in the *Monthly Bulletin*. In addition, a sum of £100 was donated to the Appeal.

Australian Dental Association.

The Australian Dental Association, New South Wales Branch, was advised that Council supported it in its contention that the principle of treatment by unqualified dental personnel is undesirable and not in the best interests of the public.

Advice was also given that Council would be prepared to take part in a joint deputation to the Minister for Health if the Australian Dental Association considered this would be of help to it.

Commonwealth Bank of Australia.

Migrant Information Service.

The Council co-operated with the Migrant Information Service, Commonwealth Bank of Australia, by providing a list of questions of a medical nature for use by doctors in the examination and treatment of migrants. The questions were translated into four languages—German, Greek, Italian and Finnish. The cost of printing and of postage was borne by the Commonwealth Bank.

Annual Ball.

The Fifth Annual Ball was held at the Trocadero on July 20, 1960, in the distinguished presence of His Excellency the Governor of New South Wales, Lieutenant-General Sir Eric Woodward, K.C.M.G., C.B., C.B.E., D.S.O., and Lady Woodward.

As in past years the Ball proved to be a most enjoyable and successful function.

Department of Public Relations.

The outstanding feature of the year's work was the Association's use for the first time of the commercial radio for popular health education.

"Your Radio Doctor", a series of 52 weekly talks, began on July 11, 1960. As sponsor, the Commonwealth Trading Bank of Australia arranged for evening broadcasting time, usually 7.55, on 26 stations (for Sydney Station 2GB) throughout Australia, the number since being increased to 65. The General Manager of the Bank commented on "the immediate popularity" of the talks. Confidential surveys (which are conducted for the radio industry) showed that the potential radio audience, at the programmed time, was estimated at 1,066,000.

At the request of the Australian Broadcasting Commission a number of talks was supplied, mainly for the "quiz" programmes.

During the year, regular articles (in addition to an article for the "Health Week" Magazine) on health and medical subjects were written and widely distributed through the country and suburban Press, under the caption "B.M.A.".

Annual Branch Prize for an Essay on a Scientific Subject.

The subject for the Annual Branch Prize for the year 1960 was "The Problem of the Staphylococcus".

The prize was won by Dr. Stephen Fisher.

The subject for the year 1961 is "Cerebral Vascular Accidents".

Golf Tournament.

The Annual Golf Tournament for the British Medical Association Cup, presented by the late Dr. H. C. Rutherford Darling, was held on the Golf Course of the Australian Golf Club at Kensington on Tuesday, November 22, 1960.

The winner was Dr. N. W. Bartrop and the runner-up Dr. G. V. Mutton.

British Medical Agency of New South Wales Limited.

The report of the Directors showed that the operations of the Company for the 12 months under review resulted in a net profit of £2,618/17/8 as compared with the profit of £2,506/6/4 for the previous year, an increase of £12/13/4.

The encouraging trend of increased profits has been maintained during the financial year under review. Costs also increased, but the additional expenditure had been offset to a great extent by the growing support from the

medical profession who are becoming increasingly aware of the various services provided for their convenience by the Company.

Medical Finance Limited.

The report of the Directors showed a profit of £26/14/11 as compared with a profit of £57/18/9 for the previous year.

During the year the Company had not advanced any further funds to practitioners, in view of the arrangement with its bankers whereby in approved cases finance may be made available by them for purchasers of medical practices and partnerships.

British Medical Insurance Company of New South Wales Limited.

The report of the Directors of British Medical Insurance Company of New South Wales Limited shows a satisfactory result for the year ended December 31, 1960. This has been due to the support of the members of the profession, a support which the Directors believe will not only continue, but will increase, as the Company is able to provide insurance at rates which are lower than those generally available.

Premises Revenue Account.

The Premises Revenue Account discloses a Net Surplus of £9,484 for the year ended December 31, 1960, as against a Net Surplus of £4,664 for the year ended December 31, 1959, thus showing an increase of £4,820 in Net Revenue earned. This increase is accounted for by a decrease in Net Expenditure of £5,048 less a decrease in Net Income of £228.

A comparison of percentages of Expenditure to Revenue with those of December 31, 1959, is as follows:

	1959	1960
Percentages of Expenses to Revenue ..	87.8	77
Percentages of Surplus to Revenue ..	12.2	23
	100%	100%

The percentages of Rent Revenue, Expenses and Depreciation and the percentage of Net Surplus for the year to Capital Value of the Land and Building (British Medical Association House) as shown by the books at December 31, 1960, namely £115,112, with the previous year's percentages in parentheses are as follows:

Rent Revenue (including amount charged for British Medical Association Branch offices, etc.)	30.3%	(32.45%)
Sundry Expenses, Interest, Provision for Painting, etc.	22.05%	(26.12%)
Depreciation of Building	2.74%	
	24.79%	(2.37%)
	5.51%	(3.96%)

Financial Statement.

The Council has pleasure in presenting to members the balance sheet and accounts in respect of the financial year which terminated on December 31, 1960. The net surplus of revenue over expenditure amounted to £12,900/10/3 after making provision for all known expenditure.

The sum of £6,336/1/9 has been written off for depreciation of the building (British Medical Association House), plant, office furniture, equipment and the library.

The sum of £800 has been provided out of the current year's revenue to create a reserve for painting of the exterior of the building. Provision for Long Service Leave has been increased by £300.

B. A. COOK,
President.

The balance sheet of the Branch and the income and expenditure account of the Branch and of the premises were received on the motion of Dr. W. F. Simmons, seconded by Dr. G. L. Howe. In speaking to the motion, Dr. Simmons announced that by the end of March, 1961, the whole of the debt on British Medical Association House would have been paid off. The announcement was received with great pleasure. Dr. G. L. Howe, Dr. Lindsay Dey and Dr. Adrian Paul commented on the financial statement. Dr. Dey drew attention to the help afforded the New South Wales Branch of the B.M.A. during the days of the financial depression by the Australian Mutual Provident Society in relation to

the debt on the building, and also to the invaluable work done at that time by the Treasurer, Dr. J. E. V. Barling.

ELECTION OF MEMBERS OF THE COUNCIL.

Dr. B. A. Cook then announced that the following had been elected to the Council as representatives of the general body of members for the ensuing year: Dr. M. S. Alexander, Dr. E. A. Booth, Dr. W. L. Calov, Dr. D. G. Hamilton, Dr. G. L. Howe, Dr. K. S. Jones, Dr. R. H. Macdonald, Dr. A. E. McGuinness, Dr. I. D. Miller, Dr. A. J. Murray, Dr. T. Y. Nelson, Dr. J. A. Paul, Dr. K. C. T. Rawle, Dr. W. F. Simmons, Dr. E. F. Thomson, Dr. P. A. Tomlinson.

Elected as representing women members: Dr. Mary C. Puckey.

Elected as representing the Public (Government) Medical Services: Dr. L. W. Wing.

Elected as representing metropolitan local associations: Dr. K. W. Alexander, Dr. Margery Scott-Young.

Elected as representing country local associations: Dr. M. C. McKinnon, Dr. B. W. Monahan.

ELECTION OF AUDITORS.

Messrs. F. W. Duesbury and Company were elected auditors for the ensuing year.

ELECTION OF REPRESENTATIVES OF THE BRANCH AT THE ANNUAL REPRESENTATIVE MEETING OF THE BRITISH MEDICAL ASSOCIATION, 1961, AT SHEFFIELD.

On the motion of Dr. A. J. Murray, seconded by Dr. K. S. Jones, it was resolved that the appointment of representatives of the New South Wales Branch to attend the annual meeting of the British Medical Association to be held at Sheffield on July 17 to 22, 1961, should be left in the hands of the Executive Officers.

PRESENTATION OF THE ANNUAL BRANCH PRIZE FOR AN ESSAY ON A SCIENTIFIC SUBJECT.

Dr. B. A. Cook presented the annual Branch prize for an essay on a scientific subject to Dr. Stephen Fisher for his essay on "The Problem of the Staphylococcus".

INCOMING PRESIDENT'S ADDRESS.

Dr. E. S. Stuckey delivered his incoming president's address entitled "The Staffing of Public Hospitals" (see page 890).

A vote of thanks to Dr. Stuckey for his address was carried on the motion of Dr. W. L. Calov, seconded by Dr. M. S. Alexander.

INDUCTION OF PRESIDENT.

Dr. B. A. Cook inducted the President for the year 1961-1962, Dr. E. S. Stuckey, and invested him with the presidential badge of office. Dr. Cook thanked the members for his election.

Out of the Past.

A COMMENDATION.¹

[From the *Australasian Medical Gazette*, April 21, 1902.]

It is not often that the self-sacrificing spirit of the medical profession is referred to in the public Press. The following extract from an article in the Broken Hill *Barrier Miner* is worth noting: "Since prevention is better than cure, there certainly is good sense in paying men for keeping us healthy rather than for treating us when we are sick; but the more the doctor in private practice now succeeds in keeping us healthy, the less is his income. In those circumstances it speaks volumes for his public spirit, his humanity, and his jealous pride in the victories of science, that the doctor, as a rule, toils unceasingly to improve the public health—to root out insanitary conditions; to familiarise the public with the rules of proper feeding and of hygiene generally; to evolve or discover a means of grappling in a simple yet speedy and effective way with dread diseases. What has in this manner been done in what is known as 'preventive medicine' constitutes the most splendid of the achievements of the profession within the last generation; yet for the greater part it is not only work unpaid for, but in doing it the profession in a great measure, 'cuts its own throat', so to speak."

¹ From the original in the Mitchell Library, Sydney.

Correspondence.

JOHN WILLIAM VAN REES HOETS.

SIR: It is very sad that the loss of such a complete and skilful gentleman as the late John Hoets should be as inevitable as the passage of time. Once again the profession has lost one of its most gracious members. Warwick Stening's appreciation, published in this week's Journal, heightened, if that were possible, my already high regard for the late John Hoets.

It was my very great privilege to have worked with Dr. Hoets, during the last war, at the Military Hospital, Concord, and some eighteen months ago, to have been a patient under his joint care myself. I can truly endorse Warwick Stening's description of his scrupulous dedication to his cases. It was with some amazement that, the day I left hospital, I watched him perform a laminectomy, at an age when most of us, if still alive, would be content to sit back in retirement.

Let us hope that the days are not yet past when such men may graduate, as Dr. Stening records, from general practice to places of high professional standing in branches of medicine or surgery.

Yours, etc.,
W. F. J. CAMMACK.

304 High Street,
Penrith,
New South Wales.
May 28, 1961.

STORAGE AND SUPPLY OF IMMUNIZING MATERIAL.

SIR: I have been interested to read the correspondence in your columns concerning the transport and storage of tetanus toxoid, and I presume the same precautions should be applied to triple antigen manufactured by the Commonwealth Serum Laboratories—that is, it should be stored between 0° and 5° C.

Since it became available in about 1952, I have been using the triple antigen made by Parke, Davis and Company. The leaflet with this preparation says that it should be stored in the dark at an equable temperature, preferably between 5° and 15° C. Consequently I have never kept this vaccine in a refrigerator. Various questions arise from this. (i) Do the children whom I have injected with this unrefrigerated antigen in fact have an effective titre of tetanus antitoxin? (ii) If the product of Parke, Davis and Company is not in fact stable at 15° C., at which temperature they say it may be stored, then presumably it would have been removed long ago from Pharmaceutical Benefits listing. (iii) If a commercial firm can make a toxoid stable at room temperature, I imagine the Commonwealth Serum Laboratories can do so too, and so overcome the storage and transport difficulties which have been discussed in your columns.

Yours, etc.,
D. HENCHMAN.

P.O. Box 71,
Kingston,
Canberra.
May 23, 1961.

POLIOMYELITIS IMMUNIZATION.

SIR: It is realized that the interruption of supplies of poliomyelitis vaccine will disrupt immunization schedules in medical practice, and it may often be necessary to defer either the second or the third injection. This postponement will of course delay the attainment of maximum protection, but beyond this need not occasion misgiving, as the time intervals between injections, provided they are not shortened, are not critical.

The dosage and the time schedules for immunization against poliomyelitis have been determined by clinical trials, and three injections are required. The primary immunization, which consists of two injections at an interval of not less than four weeks, sensitizes the immune mechanism to respond to the third or reinforcing dose when given not less than seven months after the second injection. The initial two doses provide protective levels during the seven months prior to the reinforcing dose. The second sensitizing injection appears relatively unimportant, as it merely potentiates the effect of the initial injection and

does not itself lead to a marked rise in the antibody level. However, it is essential for the maintenance of this level during the seven months between the second and third injections. The response to the reinforcing or third injection is dependent to some extent on the blood antibody titres preceding it, and when they are low the final response may be poor.

There must be a minimum period of four weeks between the first and second injections, and a minimum period of seven months between the second and third injections, but it is not necessary to recommence the whole course if one or other of these intervals has been exceeded.

When the interval between the first and second doses exceeds seven months, the second injection will act as a reinforcing dose, but a third injection is desirable because the antibody response to the second will have been submaximal. Under these circumstances, the third injection should be given, if possible, at the normal interval of seven months after the second injection. In this instance the principle of the immunization procedure has been altered from two sensitizing doses and one reinforcing dose to one sensitizing dose and two reinforcing doses, but adequate protective levels may still be expected.

No doubt, as our knowledge increases over the years, we will obtain further information on these points, and these statements may require modification.

Yours, etc.,

Commonwealth Serum Laboratories, C. E. COOK,
Parkville, Victoria.
May 25, 1961.

THE MANAGEMENT OF TETANUS.

SIR: In their letter, which appeared in THE MEDICAL JOURNAL OF AUSTRALIA, May 13, 1961, on the management of tetanus, Dr. Dwyer and Dr. Hickie rightly call for figures from Dr. Clifton of the Royal Prince Alfred Hospital. We should also value hearing of the figures of Dr. Dwyer and Dr. Hickie supporting their recommendations that "all but the very mild cases" should be treated by paralysis with *d*-tubocurarine and positive pressure respiration with the Radcliffe respirator. All four of our cases of tetanus (aged 26, 44, 12 and 27, the last three being severe) who were treated by a maintenance chlorpromazine régime have survived.

Dr. Dwyer and Dr. Hickie would, of course, have noted that our contribution was concerned only with the *early* management of tetanus, and that we concluded by indicating that controversy did exist regarding *maintenance* treatment with relaxant drugs and assisted respiration.

Yours, etc.,

IAN J. WOOD,¹
IAN R. MACKAY.¹

Clinical Research Unit of the Royal
Melbourne Hospital, and the
Walter and Eliza Hall Institute,
Melbourne.
May 24, 1961.

TREATMENT OF TOXÆMIA OF PREGNANCY.

SIR: I would like to draw your attention to a statement published in the article on the toxæmias of pregnancy (Med. J. Aust., April 15, 1961) by Margaret Mackie, being part of a symposium on the subject. In the article she states when discussing treatment of preeclampsia: "Other diuretics such as chlorothiazide are contraindicated, as their use removes the early warning signs without altering the course of a disease which, if neglected, can cause the death of the fetus and threaten the life of the mother."

This is in direct contradiction to a statement published in an article on toxæmias of pregnancy in *The Medical Clinics of North America*, March, 1961, part of a symposium on hypertension and its treatment. On page 489 the author, Frank Finnerty, states in discussing treatment of preeclampsia: "The thiazides . . . when used alone at the first sign of excessive weight gain frequently reverse the toxemic process. Even more important is the observation that they can be administered continuously without the development

¹ Working with the aid of a grant from the National Health and Medical Research Council of Australia.

of drug resistance, thus preventing the development of vasoconstriction. For practical purposes the prevention of vasoconstriction is equivalent to prevention of toxemia."

I think it is most important that other expert opinion should be published so as to clarify this alarming difference of opinion.

Yours, etc.,

G. JOHNSON.

Bundaberg,
Queensland.
May 28, 1961.

HOW THE DOCTOR LOOKS AT HIS JOURNALS.

SIR: In an interesting survey of how doctors read THE MEDICAL JOURNAL OF AUSTRALIA, Dr. Anderson (Med. J. Aust., May 20, 1961) recorded that 68 out of 70 doctors usually or occasionally read original articles which appear in the Journal. It is gratifying to authors that of all other material published in the Journal, their contributions, though criticized, were ignored by the fewest readers. Since over 50% of doctors questioned in the survey seldom or never read the Journal from cover to cover, this critical attention which original articles receive speaks favourably of the interest of doctors and of the quality of the articles which are printed in THE MEDICAL JOURNAL OF AUSTRALIA.

In an Editorial comment on medical journalism in Australia, you give good reasons why a fair share of Australian work should be published in local journals, provided that by doing so the work will not lose status or pass into obscurity. It has been my experience that no undue delay occurs before articles published in THE MEDICAL JOURNAL OF AUSTRALIA are noticed by workers in other countries, either directly or as an abstract in other journals. Of 10 original articles which appeared in THE MEDICAL JOURNAL OF AUSTRALIA between 1952 and 1959, the numbers of requests for reprints of these articles received from other countries were as follows: United States of America, 35; Germany, 13; Hungary, 7; Canada, 4; Czechoslovakia, 3; Yugoslavia, 3; Denmark, 3; England, 3; Switzerland, 2; South Africa, 2; Spain, 2; Holland, 2; Poland, 2; India, 1; Japan, 1; Italy, 1; Korea, 1; Belgium, 1; Malaya, 1; France, 1.

Since the articles in question were specialized in nature, other contributors of original articles to the Journal will no doubt be able to extend this list and provide further evidence that articles printed in THE MEDICAL JOURNAL OF AUSTRALIA are in no danger of remaining unnoticed.

Yours, etc.,

SAUL WIENER.

Prince Henry's Hospital,
St. Kilda Road,
Melbourne.
May 24, 1961.

Post-Graduate Work.

THE POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

Course in Neurology.

THE Post-Graduate Committee in Medicine in the University of Sydney announces that a course in neurology suitable for physicians and for those studying for higher degrees or diplomas is being held at the Northcott Neurological Centre, under the supervision of Dr. L. S. Basser, from 8 p.m. to 9.30 p.m., as follows.

Tuesday, June 20, "Extrapyramidal Disorders, with Particular Reference to Parkinson's Disease", Dr. G. Selby; Thursday, June 22, "Diseases of the Spinal Cord, Including Motor Neuron Disease; Subacute Combined Degeneration of the Cord; Cervical Spondylosis; Tumours", Dr. J. L. Allsop; Tuesday, June 27, "Neuropathology", Dr. Brian Turner; Thursday, June 29, "Neurological Disorders in Childhood", Dr. L. Rail.

Tuesday, July 4, "Disorders of Language", Dr. K. B. Noad; Thursday, July 6, "Diseases of Muscles, with Particular Reference to Myopathies and Myasthenia Gravis", Dr. L. S. Basser; Tuesday, July 11, "Neurological Aspects of General Medical Diseases", Dr. W. J. Burke; Thursday, July 13, "Neuro-Radiology—Plain X-Rays—Skull and Spine", Dr. B. P. Cahill; Tuesday, July 18, "Headache—Diagnosis, Investigation and Treatment, with Special Reference to

Migrainous Equivalents", Dr. G. Selby; Thursday, July 20, "Peripheral Nerve Lesions and Neuropathies", Dr. W. H. Wolfenden; Tuesday, July 25, "Hereditary and Familial Neurological Disorders", Dr. J. L. Allsop.

The fee for attendance is £5 5s., and those wishing to enrol are requested to make early application to the Course Secretary, The Post-Graduate Committee in Medicine, Herford House, 188 Oxford Street, Paddington, New South Wales. Telephone: 31-0671. Telegraphic address: "Postgrad Sydney".

Conference at Katoomba.

The Post-Graduate Committee in Medicine in the University of Sydney, in conjunction with the Blue Mountains Medical Association, will hold a post-graduate week-end conference in the Ballroom at the Carrington Hotel, Katoomba, on Saturday and Sunday, June 24 and 25, 1961. The programme is as follows:

Saturday, June 24: 2 p.m., registration; 2.30 p.m., (a) "The Management of Some Aspects of Diabetes", (b) "The Management of Acute Barbiturate Overdosage", (c) "Bronchiectasis, Bronchitis or Asthma?", Dr. James Ishbister; 4 p.m., "Recent Advances in Haematology", Dr. R. J. Walsh.

Sunday, June 25: 10.15 a.m., "Vascular Problems in General Practice", Associate Professor G. D. Tracy; 11.45 a.m., "Another Look at Strokes and Coronary Occlusions", Dr. James Ishbister; 2 p.m., "Iron in Health", Dr. R. J. Walsh; 3.15 p.m., "Some Complications of Surgical Operations", Associate Professor G. D. Tracy; 4.15 p.m., question time.

Payment for lectures is £4 4s., which includes post-graduate fee of £3 3s., and those wishing to attend the course are requested to communicate as soon as possible with Dr. A. W. Raymond, Honorary Secretary, The Blue Mountains Medical Association, "Sunningdale", Great Western Highway, Wentworth Falls. Telephone: Wentworth Falls 81.

THE MELBOURNE MEDICAL POST-GRADUATE COMMITTEE.

PROGRAMME FOR JULY, 1961.

THE Melbourne Medical Post-Graduate Committee announces that the following programme has been arranged for July, 1961.

Course in Pathology.

A course in pathology for primary F.R.A.C.S. and F.F.A.R.A.C.S. will commence at the University of Melbourne on Monday, July 3, at 1.30 p.m., and will continue on Mondays and Wednesdays for six weeks. The fee for the course is £7 7s., and should be sent to the Committee, with enrolment, by June 19.

Overseas Visitor.

Dr. George A. Perera, Assistant Dean of Medicine in the Columbia University, physician at the Presbyterian Hospital, New York, will visit Melbourne as the Pfizer Lecturer for 1961. During the week of his visit, he will give two lectures in the Medical Society Hall at 8.15 p.m., as follows: Monday, July 17, "Diagnostic and Prognostic Evaluation of the Hypertensive Patient"; Thursday, July 20, "Hyponatraemia (The Sea Within Us)". All members of the medical profession are invited without fee. Further details regarding his visits to hospitals will be published later.

Pediatrics.

The staff of the Royal Children's Hospital will conduct a post-graduate week, commencing on September 4, designed for medical practitioners desiring a refresher course, for school medical officers and for recent graduates. This is a full-time course, conducted at the Royal Children's Hospital from Monday to Thursday, and at the Royal Society Hall, 8 Latrobe Street, on Friday and Saturday, when the tuition will be more advanced, concentrating on current problems and recent advances. There will be a registration fee of £2 2s., and enrolments should be sent to the Committee by August 21.

Post-Graduate Surgery.

From July 31 to October 6, the Victorian State Committee of the Royal Australasian College of Surgeons will conduct a full-time course in surgery. The fees will be £21 for full-time instruction, or £10 10s. for the clinical instruction in the late afternoons. Entries close on July 14, and should be sent to the Secretary of the College, Spring Street, Melbourne, from whom further details can be obtained.

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Neuropathology.

The Department of Mental Hygiene has arranged for their neuropathologist, Dr. J. Mackiewicz, to conduct a course of lecture demonstrations on Wednesdays from 1 to 2.30 p.m., commencing on June 21, and weekly tutorials on Fridays from 1 to 2 p.m., commencing on June 23. These will all take place at the Neuropathology Laboratory, Royal Park, Oak Street, Parkville. The course is open to all medical graduates without fee, and applicants should get into touch with Dr. Mackiewicz or with the Chief Clinical Officer, Mental Health Research Institute, Poplar Road, Parkville.

RECORDED LECTURES.

The following have been added to the Committee's library of 10 in. microgroove discs, with accompanying 2 in. by 2 in. slides, and may be borrowed on request without fee: "Endocrine Relations", by Professor Douglas Hubble, of Birmingham, 2 discs, 19 slides; "Strokes as the Neurosurgeon Sees Them", by Dr. E. Harry Botterell, of Toronto, 2 discs, 54 slides; "Cranio-Cerebral Injuries—Prevention and Treatment", by Dr. E. H. Botterell, 2 discs, 53 slides.

ADDRESS.

The address of the Melbourne Medical Post-Graduate Committee is 394 Albert Street, East Melbourne. Telephone: FB 2547.

Notes and News.**Katherine Bishop Harman Prize, 1961.**

The Katherine Bishop Harman Prize of the British Medical Association for 1961 has been awarded to Dr. D. B. Pitt of Melbourne for an entry entitled "Congenital Malformations and Maternal Rubella". This is published on page 881 of this issue.

It is interesting to recall that in 1949 the Katherine Bishop Harman Prize for 1949 was awarded to Dr. Charles Swan, of Adelaide, for a paper entitled "Rubella in Pregnancy as an Etiological Factor in Congenital Malformation, Mis-

carriage and Abortion", in which he reviewed his earlier work, which had done so much to draw world-wide attention to the subject after Gregg's initial discovery.

Australian Academy of Science Research Fellowships.

The Australian Academy of Science announces the following research fellowships.

Burroughs Wellcome Fellowships.

Awards of the Burroughs Wellcome Fellowships will be made in such a way that there are not more than three fellowships occupied at any time, each tenable for two years. The fellowships may be awarded in any branch of medical sciences. They must be occupied in one of the following professorial departments of an Australian university: medicine, psychological medicine, preventive medicine, experimental medicine, paediatric medicine (child health), pharmacology or pharmaceutical science. Applicants should, in general, hold the Ph.D. degree or have equivalent status and experience. Preference will be given to applicants who are under the age of 30 years on July 1 in the year in which the application is received. The stipend is £2000 per annum. A Fellow may, on application to the Council of the Academy, be allowed to undertake a limited amount of teaching, for which he may receive remuneration. There is no printed form of application. Each applicant will be required to state the general nature and scope of the research he wishes to undertake, and the university department which is prepared to accept him. He should submit copies of scientific papers that he has already published, and should furnish the names of three referees who can speak from personal knowledge of his capacity for research. Applications will close on September 30, and candidates will be notified not later than December 14.

United States Public Health Service Fellowships.

Up to four or five awards may be made each year for work in "health-related" fields (broadly interpreted) in any medical or biological laboratory in the United States of America. Each award will usually be made for one year,

¹ *J. Obstet. Gynaec. Brit. Emp.*, 1949, 56: 341 and 591 (June and August).

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED MAY 13, 1961.*

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Australian Capital Territory.	Australia.
Acute Rheumatism	2(1)	1(1)	..	..	..	..	3
Amoebiasis	..	1	..	2	..	..	10	..	13
Ancylostomiasis
Anthrax
Bilharziasis	2	..	..	..	..	..	2
Brucellosis
Cholera
Chorea (St. Vitus)
Dengue
Diarrhoea (Infantile)	3	8(8)	3(3)	..	..	..	..	..	14
Diphtheria
Dysentery (Bacillary)	..	3(1)	..	2(2)	..	..	2	..	7
Encephalitis
Filariasis
Homologous Serum Jaundice	1
Hydatid
Infective Hepatitis	..	11(28)	75(44)	10(1)	30(26)	7(3)	1	8	242
Lead Poisoning
Leprosy	3	..	..	..	..	3
Leptospirosis	1	..	2(2)	..	..	3
Malaria
Meningococcal Infection
Ophtalmia
Ornithosis
Paratyphoid
Plague
Poliomyelitis	1(1)	1	..	..	..	..	2
Puerperal Fever	..	2	..	..	..	..	..	..	2
Rubella	3(3)	..	1(1)	2(2)	..	..	6
Salmonella Infection	3(3)	..	..	..	3
Scarlet Fever	..	14(4)	18(4)	..	4(2)	..	8	..	34
Smallpox
Tetanus	2	..	..	2
Trachoma
Trichomoniasis
Tuberculosis	88(31)	11(9)	10(6)	9(7)	7(5)	2(1)	6
Typhoid Fever	..	1	..	..	..	..	..	..	1
Typhus (Flea- Mite- and Tick-borne)
Typhus (Louse-borne)
Yellow Fever

* Figures in parentheses are those for the metropolitan area.

but a second or part thereof may be approved when adequately justified. The candidate must have the following qualifications. He must have obtained a doctor's degree or its equivalent in one of the medical or related sciences, and also must have demonstrated outstanding research promise. He must have made satisfactory arrangements with a laboratory in the United States at which he proposes to train. Documentary evidence of acceptance by a sponsor in the United States must be provided. He must have demonstrated proficiency in research, with indication that he will pursue a research and/or academic career for a reasonable period after training. A stipend of \$4500 is provided. In addition, \$500 is provided for spouse and each dependent child, whether or not the dependents accompany the Fellow to the United States. Travel for the Fellow only (not for dependents) is provided at the rate of six cents per mile from home to the laboratory in the United States and return. No allowance will be made for shipment of personal or household effects. The Fellow may commence training at any date which he and his laboratory of choice find convenient, within ten months of formal notification of the award.

Applications must be made on the approved form. Applications close on December 1. The results will be announced in the following April.

Applications.

Applications should be made to the Assistant Secretary, Australian Academy of Science, Gordon Street, Canberra City, A.C.T.

Oral Poliomyelitis Vaccine.

The Wellcome Foundation has been granted a Government licence to export Sabin oral poliomyelitis vaccine. Originator of the vaccine, Dr. A. B. Sabin, said in London that the Foundation had had the courage to venture its private resources in a new and immensely complex production technique. Dr. Sabin, a research professor at Cincinnati University, U.S.A., is visiting Europe advising on the manufacture and use of his vaccine. He said that certain countries which had been unable to afford a programme of Salk injections would find the cost of an oral immunization programme more within their means. An important contributory factor, apart from the simplicity of oral administration, was that as many as 2,000,000 doses could be prepared from the kidneys of a single monkey. He thought that poliomyelitis could one day be eliminated as a statistical disease.

Honours.

BIRTHDAY HONOURS.

HER MAJESTY THE QUEEN has been pleased to confer the following honours on Australian medical practitioners:

Dr. Ian Douglas Miller and Dr. Reginald Francis Matters have been created Knights Bachelor.

Dr. John Orde Poynton has been created a Companion of the Most Distinguished Order of St. Michael and St. George.

Dr. John Joseph Power and Dr. Clive Wentworth Uhr have been created Commanders of the Most Excellent Order of the British Empire.

Dr. Eric Vere Corry and Dr. Fanny Reading have been created Members of the Most Excellent Order of the British Empire.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Barold, Samuel Serge, M.B., B.S., 1960 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.

Cooke, David Edmund, M.B., B.S., 1960 (Univ. Sydney), 16 Kimberley Avenue, Lane Cove.

Deaths.

THE following death has been announced:

CONNELLY.—Thomas Gerard Connelly, on June 3, 1961, at Maroubra, New South Wales.

Diary for the Month.

JUNE 19.—Victorian Branch, B.M.A.: Finance Sub-Committee.
JUNE 20.—New South Wales Branch, B.M.A.: Medical Politics Committee.
JUNE 21.—Western Australian Branch, B.M.A.: General Meeting.
JUNE 21.—Victorian Branch, B.M.A.: Branch Meeting.
JUNE 22.—New South Wales Branch, B.M.A.: Clinical Meeting.
JUNE 23.—Queensland Branch, B.M.A.: Council Meeting.
JUNE 27.—New South Wales Branch, B.M.A.: Hospitals Committee.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney): Medical Officers to Sydney City Council. All contract practice appointments in New South Wales. Members are requested to consult the Medical Secretary before undertaking practice in dwellings owned by the Housing Commission.

South Australian Branch (Honorary Secretary, 80 Brougham Place, North Adelaide): All contract practice appointments in South Australia.

Editorial Notices.

ALL articles submitted for publication in this Journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations, other than those normally used by the Journal, and not to underline either words or phrases.

Authors of papers are asked to state for inclusion in the title their principal qualifications as well as their relevant appointment and/or the unit, hospital or department from which the paper comes.

References to articles and books should be carefully checked. In a reference to an article in a journal the following information should be given: surname of author, initials of author, year, full title of article, name of journal, volume, number of first page of article. In a reference to a book the following information should be given: surname of author, initials of author, year of publication, full title of book, publisher, place of publication, page number (where relevant). The abbreviations used for the titles of journals are those of the list known as "World Medical Periodicals" (published by the World Medical Association). If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full data in each instance.

Authors submitting illustrations are asked, if possible, to provide the originals (x : photographic copies) of line drawings, graphs and diagrams, and prints from the original negatives of photomicrographs. Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary is stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: 68-2651-2-3.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this Journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such notification is received within one month.

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